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THE BIRDS
OF THE
BERMUDAS.

BY

SAVILE G. REID, R.E., F.Z.S.

PRINTED IN "THE ZOOLOGIST" FOR OCTOBER AND NOVEMBER, 1877,
AND NOW REPRINTED BY PERMISSION, WITH AN APPENDIX.

BERMUDA:
PRINTED AT THE "ROYAL GAZETTE" OFFICE, HAMILTON.

1883.

THE BIBLE

OF THE

BERMUDAS.

BY

ALICE G. REED, B.A., F.R.S.

THE BIBLE SOCIETY OF THE BERMUDAS, LTD.
ST. JOHN'S, BERMUDA.

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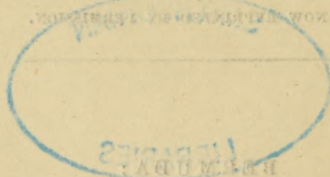
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1888.

THE BIRDS OF THE BERMUDAS.

BY LIEUT. REID, R.E., F.Z.S.*

IN March, 1874, when ordered to the Bermudas to complete my tour of foreign service, I made diligent and most anxious enquiries about the birds likely to be found there, and I must say the answers I got from brother officers and others who were familiar with the islands were anything but satisfactory in an ornithological point of view. I was informed that birds were few and far between, with the exception of one or two common resident species, and a casual flock of plovers or waders in the autumn months. My ardour cooled to zero abruptly. I looked forward to the red, blue, black, and white birds of my informants, and the uncertain and erratic Plover, with a sigh of despair! Should I take a gun at all, to lie idle in the damp corrosive climate to which I was bound?

However, on board the good ship *Severn*—a hired transport, which conveyed the company of Royal Engineers to which I then belonged across the Atlantic—I found some officers of H.M. 53rd Regiment returning to Bermuda from leave in England, one of whom (Capt. Rooke) was a great sportsman, and had shot and collected some birds during his previous residence in the “beautiful isle of the sea.” His account was decidedly reassuring. He spoke of twenty or more species, and delighted my ears with the magic words—“Teal” and “Snipe.” I was thankful then that my trusty 16-bore was lying snug and safe in my cabin, ready to add to the Bermuda lists when called upon.

We left Gibraltar on the 12th, but did not land in Bermuda till March 30th, owing to a pleasant head-wind and somewhat limited powers of locomotion. My note-book was started next day—our first on shore—and was religiously kept up from that time till June 3rd, 1875, when I left again for English soil.

In this brief sketch, and in face of the heading assigned to it, I must needs confine myself to the birds alone; and it would be out of place were I to attempt any description of the islands themselves, their inhabitants, scenery, or productions.

* These notes on the Ornithology of the Bermudas were originally published in ten different numbers of *The Field*, in July, August, and September, 1875. They are now reprinted, with corrections and numerous additions by Lieut. H. Denison, R.E., F.Z.S., who has kindly assisted the author in revising them.

THE BIRDS OF THE BERMUDAS.

Situated in lat. $32^{\circ} 15' N.$, and long. $64^{\circ} 51' W.$, six hundred miles or more from the great North American continent, and exposed to the full force of ever-varying gales, the long, narrow group of islands known as the "Bermudas" offer a harbour of refuge to many a weary, storm-beaten migrant on its passage north or south, and in consequence we find a great many genera of the North American avi-fauna represented in the visiting list. On this subject my friend Mr. J. Matthew Jones, of the Middle Temple, editor of "The Naturalist in Bermuda" (1859), remarks—"That the Bermudas afford an excellent position from whence to observe the annual migration of many species of the feathered tribes of America cannot be doubted. Equidistant, or nearly so, from the shores of Nova Scotia, the United States, and the West Indian archipelago, they present, as it were, a casual resting-place to many birds while traversing the broad expanse of ocean which forms the eastern limit of their great line of flight."

Some species, as the American Golden Plover, American Snipe, Sora Rail, Night Hawk, *Chordeiles virginianus*, Yellowshanks, &c., seldom fail to appear every autumn, and may be set down as regular visitors, probably from the fact that their line of migration is direct from the north-eastern coasts of the continent to the West Indies and tropical South America; but, as will presently be seen, the great bulk of the recorded species are irregular or accidental visitors, whose migratory journeys are less ambitious, and who are blown off the mainland by unfavourable winds. That fresh species will from time to time be added to the present list is more than probable; in fact, it is possible that the whole avi-fauna of North America may eventually be recorded as Bermudian. When such diminutive flyers as the Ruby-throated Humming-bird, *Trochilus colubris*, and the Blue Yellow-backed Warbler, *Parula americana*, can find their way across six hundred miles of water in safety, where is the line to be drawn?

With the exception of a solitary example of the European Sky Lark, *Alauda arvensis*, obtained in 1850, the whole of the birds recorded in the Bermuda list are included in that of North America, and no species has as yet been discovered peculiar to the islands. This, if we accept the theory of the comparatively recent "Æolian" formation of the group, is not to be wondered at. At one time I actually had great hopes of establishing a real 'Mudian species, as I several times observed a small brown bird, remarkably shy and mouse-like in its habits, among the dense rushes and scrub of the larger swamps, and this I could not refer to any known North American form. I had a good view of one, too, close to me, one Sunday afternoon (of course it was on a Sunday, when I had no gun with me), and carefully took stock of the little fellow; but, as I never succeeded in procuring a specimen, I must perforce leave the question undecided, in the hope that someone may be more fortunate in this respect than myself.

Rejecting doubtful occurrences, one hundred and eighty-one species are known to have occurred in the Bermudas up to June 3rd, 1875. Since then two more species, *Certhia familiaris* and *Limosa hudsonica*, have been added. During the fourteen months

I resided there, no less than seventy-nine species were recorded, sixty-eight of these by myself personally. I was only able, however, to obtain specimens of sixty-one of these, but that, of course, far exceeded my original expectations. The winter of 1874-75 was not exactly a favourable one for a collector, few violent storms occurring at critical times to drive the birds to the strange and unexpected shelter in mid-ocean. I worked hard—as hard, that is to say, as my multifarious duties as an engineer officer would permit—but many things were against me. In the first place, the peculiar elongated shape of the group of islands, and the long distances between the various swamps and “likely” places, to say nothing of the indifferent character of the roads, render it no easy task to “register” even a particular district in the course of an afternoon. The climate, too, except when the wind is from the north in winter time, is warm and damp, and much against a long struggle through the sage bush and scrubby cedars which clothe the hills, or over the rough steel-pointed rocks of the shore. Then there is such an extent of cedar forest, dotted here and there with patches of highly-cultivated garden, that it is hard to find birds, or, when found, to follow them up. Mosquitoes are frightfully large and ferocious in summer and autumn, especially in and around the ponds and swamps. Many a time have I lost a long-expected shot by having to brush the little torments in dozens from my nose and eyes. And as to believing a word the good-natured coloured people tell you about the extraordinary birds they see, it is simply impossible.

But, in spite of these drawbacks, I enjoyed my ornithological labours vastly, and look back with pleasure not only to the successful stalk or lucky snap-shot which occasionally rewarded my exertions, but also to the numerous instructive hours I passed, field-glass in hand, in the deepest recesses of the swamps or on the open shore, watching the agile *Mniotilta varia* and the comical *Totanus solitarius*, or listening to the loud musical “chip” of *Seiurus noveboracensis*, and the harsh, grating cry of the Phaëtons.

In the following notes I have largely availed myself of those of Major Wedderburn (late 42nd Highlanders) and Mr. Hurdis (formerly Controller of Customs in the islands), which have already been given to the public in a little work, entitled “The Naturalist in Bermuda,” to which I have already alluded; also of the collection of birds formed, during the last twenty-five years, by Mr. Bartram, of Stocks Point, near St. George’s. I trust I may be held excused for the constant references to these sources of information, both by the gentlemen named and by the indulgent ornithological reader. Major Wedderburn and Mr. Hurdis compiled their valuable notes long before my time, as may be inferred from the date of the book mentioned (1859); and since their departure no one, except my friend Mr. J. M. Jones, appears to have kept any record of the bird-life of the islands—more’s the pity. With Mr. Bartram, now an elderly man, I struck up a great friendship, and I spent many an afternoon poring over his birds. Of these I made out a catalogue for him, likely, I think, to defy the criticism of his ordinary visitors, though I cannot quite vouch for its accu-

racy on all points. The genus *Dendroica* is truly a "caution," and several of Mr. Bartram's specimens, ancient and somewhat dilapidated, puzzled me sorely.

He has about one hundred and ten species of Bermuda birds, and many "outsiders" mixed up with them; but I was careful, with his assistance, to reject all doubtful specimens in compiling the catalogue. An old soldier, settling at the expiration of his service on the picturesque promontory of Stocks Point, where he still resides, Mr. Bartram has added the study of Natural Science to that of farming; and, in addition to producing the best arrow-root in the place, he has a turn at Geology, Conchology, Ornithology, and several other "ologies;" writes on scientific subjects to the local papers; and smokes his pipe in his museum, monarch of all he surveys—a commendable example to the British army.

These, however, are not the only assistants, past or present, that I met with. My friend Col. Bland, R.E., an excellent ornithologist, though he was too much engrossed with the cares of the R.E. office to accompany me in many of my excursions, helped me much in my identifications, which his knowledge of Canadian forms greatly aided; while Mr. J. M. Jones, besides placing his notebook at my disposal, was always ready with a suggestion or kind word of encouragement. Lieut. Denison, R.E., my companion in many a bird-hunt in days gone by, arrived in Bermuda in January, 1875—too late, unfortunately, to take much part in my labours. On him falls the task of checking and "auditing" my accounts, of remedying numerous deficiencies, and of supplying much additional information during his eighteen months' "durance vile" in Bermuda.

To save confusion I have adopted the nomenclature of Dr. Coues, in his "Key to North American Birds;" for, though I do not conscientiously endorse the same throughout, I feel impelled, by the force of modern subversive currents, to adhere to it.

Turdus migratorius, Red-breasted Thrush; Robin.—By no means common, but occasionally arrives singly or in small flocks, both on northward and southward migrations, especially the former. Specimens were obtained in February and March, 1850, and in March, 1855. One was sent to Mr. J. M. Jones on November 24th, 1871, when several others were seen. I saw one near Hungry Bay on October 29th, 1874; and Mr. Bartram obtained one at Stocks Point about the same time. The three last-named occurrences established the autumnal appearance of the species, which had not been recorded in former years. Like many other migrants, the "Robin" would seem to modify its habits considerably on finding itself in a strange country, and to become shy and retiring in disposition. The bird I saw took up its quarters in a thick mangrove swamp, and remained there, or in some tall thick cedars hard by, for several days. An intelligent coloured boy in charge of cattle on an adjoining meadow, who really *does* know how to describe a bird, saw it frequently, and told me it was very wild and hard to get near. This is very unlike the "Robin" I have met with in Canada and the United States. It is a thousand pities that this

fine bird cannot be persuaded to stay and breed in Bermuda, and to add its music to that of the common resident species. Major Wedderburn mentions (Nat. in B., p. 27) that a portion of a small flock of unfortunates, which made their appearance in February, 1850, was spared, in the hope that they might be tempted to remain; but they all disappeared in a few weeks' time, not leaving a single straggler. [A male of this species was shot in Devonshire Swamp on November 27th, 1875.—H. D.]

Turdus mustelinus, Wood Thrush.—Only one appearance of this species is on record, viz., in the autumn of 1849—a season also memorable in Bermuda annals for an extraordinary invasion of Swallows and Cuckoos which took place throughout the islands. Both Major Wedderburn and Mr. Hurdie obtained specimens of this Thrush, but Mr. Bartram was not so fortunate.

Turdus Swainsoni, Olive-backed Thrush.—This species also visited Bermuda in small numbers during the productive autumn of 1849, when a few were obtained. It has since occurred, at long intervals, in the autumn. Mr. Bartram's collection contains three specimens of various dates. On April 29th, 1875, I shot a fine male in Smith's Marsh, the only instance of its vernal appearance. The stomach contained four or five white grubs, and some fragments of marsh plants. [One was brought to me on September 22nd, 1875; and another, a male, was killed by a boy with a stick in Devonshire Swamp, and brought to me on February 19th, 1876.—H. D.]

Mimus carolinensis, Cat Bird, locally termed "Blackbird."—Resident and abundant; its harsh, mewing cry may be heard all the year round, relieved in spring by a weak but commendable roundelay. After a shower of rain in May or June the marshes appear literally alive with these sprightly birds, and a most agreeable concert takes place among the males, prolonged till dusk should the weather continue fine. On ordinary occasions during spring time they sing a good deal, but rain seems to delight them beyond measure. They are at most times remarkably bold birds, and follow an intruder through the swamp or cedar grove, perching close to him and scolding most unmusically; but when a pair have a nest they are far more suspicious, and silently leave the neighbourhood of their home. The hen bird sits very close on her eggs, but when disturbed darts rapidly away, returning as quickly and noiselessly when danger is past. Nidification commences about the end of the first week in April, and again at the end of May, two broods being reared. The nest is a large clumsy structure, built of dry grasses, weeds, and twigs, lined with small rootlets. It is very often ornamented externally with rags, bits of paper, skeleton leaves, &c., according to the quaint fancy of the architect. The usual site is in a cedar branch or lemon tree, at from three to eight feet from the ground; but occasionally an ambitious pair will go a few feet higher. Eggs deep blue, with a greenish tinge, .92 in. by .68 in., usually four in number. Among the numerous nests I examined I found a considerable proportion to contain one egg much shorter and rounder than the other three. In one case this egg was almost a perfect sphere. There being but

few grapes or wall fruits grown in Bermuda to attract these mischievous birds, they are not looked upon with the same disfavour as in the United States.

Saxicola ananthe, Wheatear.—This bird, a waif and a stray from Europe, *viâ* Greenland, to the American continent, has actually found its way to these remote islands. One was shot by an officer of the garrison, near the lighthouse, on October 5th, 1846; the tail, unfortunately, was the only portion preserved, but this was sent to the late Mr. Yarrell, who confirmed its identity. Another was seen frequently by Col. Drummond and Major Wedderburn, near St. George's, in March, 1850, but baffled all their attempts to obtain it. Whether these two examples came direct from Greenland, or were blown off the American coast, is an inscrutable mystery.

Sialia sialis, Eastern Blue Bird.—Resident, and very common. It is also migratory, arriving in small flocks after heavy gales in the winter months. Major Wedderburn observed them in large flocks at Ireland Island on January 5th, 1848; and my friend Mr. J. M. Jones records their appearance in smaller bands in the Novembers of 1866 and 1871. I have frequently noticed a sudden increase in the numbers of this species in winter, but the visitors appear to leave again in the early spring, taking with them doubtless some of their 'Mudian brethren, for no perceptible accession of strength is apparent during the ensuing summer. This is, to my mind, the most delightful of birds, and certainly the flower of the limited flock of Bermuda residents; its brilliant plumage, vivacious manners, and pleasant warble, render it an object of interest to all; while its confiding and fearless nature in the breeding season, and the number of noxious insects it destroys, cause it to be strictly protected throughout the islands. The male bird in spring, when the sun's rays illumine his dazzling blue plumage, is perfectly lovely: he flashes across the road like a ray of azure light, and seems actually to blaze with intense colour from among the sombre foliage of the cedars. His spouse is far more sober in her attire; but she too puts on nuptial attire and looks uncommonly smart in April and May, when she acquires an unusually vivid blue, and much suffusion of reddish brown about the head. I accidentally shot one in this plumage one afternoon, thinking it was a stranger, so much did it differ from the ordinary female. They breed twice, and, I believe, in some cases thrice: I have seen fresh eggs on April 4th, and as late as June 19th. Eggs four or five, delicate pale blue, unspotted, '85 in. by '68 in. Nest of grasses and bents, in all manner of places. I have found them commonly in holes in old quarries or roadside cuttings; also in crevices of walls; in rocks, even when some little distance from the shore; in holes in trees; on the branches of trees; in stove and water pipes; in calabashes, boxes, &c., hung up for them in the verandahs of houses; in the folds of a canvas awning outside the door of one of the officers' quarters at Prospect Camp; and in several other curious situations. The female sits close, and I have caught her on the nest. The young are strikingly spotted till their first moult. The males sing much in the early morning in

spring, both stationary and on the wing, and continue their song, though with diminished ardour, till an hour or so before sunset. A warm sunny day in winter, however, is the time to hear them in perfection, when a favourite cedar grove will resound with their combined melody, each songster perched on the very topmost twig of a tall cedar. The song is merely a short, but sweet, wild little stave, sounding to me not unlike that of the Blue Thrush, *Monticola cyaneus*, as I used to hear it from the heights, far away above my head, on the rock of Gibraltar. The call-note is a soft twitter; but they have also a loud double note, "cher-wee," reminding one forcibly of that of an *Ægialitis*. Attempts are made frequently to bring up young birds from the nest, but they rarely succeed. A few live ones are to be seen in captivity, presumably adults captured by birdlime or in traps; but as a cage bird it is a failure. It occasionally drives the Red Bird, *Pitylus cardinalis*, from its nest, even after eggs have been laid, and uses it as a foundation for its own. This is somewhat extraordinary, when one considers the formidable bill of the victim; but the Blue Bird is a determined little fellow, and fortune favours the bold. A great number of "crawlers"—long scaly grubs, with no end of legs—are destroyed by these useful birds, who will sit patiently watching for them on a convenient twig, swooping down on the first comer, and bearing him off in triumph. They will also dart into the air after passing insects much like a Flycatcher, returning each time to their starting-point. They are very bold in pursuit of prey when they have young to feed, but always visit their nest with extreme caution should an observer be near. [Mr. Bartram believes that they do not migrate, but merely collect into flocks for the winter. —H. D.]

Sitta canadensis, Red-bellied Nuthatch.—One specimen only, in Mr. Bartram's collection, shot by himself near his house at Stocks Point.

[*Certhia familiaris*, Brown Creeper.—A male bird of this species was shot by Bendall, an old soldier of the 53rd Regiment, out of three or four seen in Devonshire Swamp, on November 24th, 1876. —H. D.]

Alauda arvensis, European Sky Lark.—Mr. Hurdis shot the only example of this well-known bird on June 12th, 1850. It had no appearance of being an escaped cage bird; and I do not see why a strong gale should not have driven it even to such a distance from its ordinary line of flight. Prof. Newton, in his fourth edition of Yarrell's "British Birds," alludes to this specimen in describing the geographical distribution of the species, but seems inclined to doubt its being a genuine wild bird. It is possible that it may have been the Missouri Sky Lark, *Neocorys Spraguei*, recently ascertained to be by no means uncommon in the "Far West." The bird, I believe, was presented to Major Wedderburn. A further examination might lead to interesting results. It is worthy of remark that this unfortunate bird was described to Mr. Hurdis by a "coloured" lad as being "less than a pigeon, and of a light-green colour about the neck;" also as making a "curious noise" in the air, and as not knowing apparently "how to get down

again," finally "tumbling down like a stone." This is a fair sample of the information one may expect in Bermuda.

Eremophila alpestris, Shore Lark.—Three examples are recorded by Major Wedderburn: two at St. George's, October 25th, 1849; and one at Spanish Point, February 27th, 1850. In Mr. Bartram's collection are three specimens. I shot a fine male on the north shore, close to the old lunatic asylum, on January 29th, 1875. It fell into the sea, in the middle of a huge mass of "gulf" weed, through which I had to swim some distance for it. Fortunately I was not observed, or I might have found myself an inmate of the adjacent building. [Two others were obtained, and brought to me in January, 1876.—H. D.]

Anthus ludovicianus, Brown Lark; Pipit.—Major Wedderburn has a specimen in his possession, shot by Mr. Fozard on November 26th, 1848. There are two others in Mr. Bartram's collection, shot by himself near St. George's.

Mniotilta varia, Black-and-White Creeper.—In October, 1849, one example of this neat little warbler (it belongs to the *Sylviolidae*, though the English name points to the *Certhidae*) was shot at St. George's; and two or three more seen between that town and Hamilton. One was obtained at Ireland Island on October 27th, 1852. Mr. J. M. Jones shot one in Devonshire Marsh, in January, 1871. I found them quite common in the autumn of 1874, and winter succeeding it, and obtained several specimens, chiefly in the tall cedars of Devonshire Swamp and around Hungry Bay. This bird was one of my especial favourites; and I used to sit for hours watching its quick and graceful motions, and its dexterity in capturing insects. Its mode of "registering" branch after branch, commencing at the bottom and ending at the outermost twigs, is very like that of our familiar European Creeper.

Parula americana, Blue Yellow-backed Warbler.—This diminutive bird seems hardly fitted for a journey of six hundred miles across the ocean. Nevertheless, four examples are on record, viz.—one shot by Canon Tristram at Ireland Island, on April 21st, 1849; one found by Mr. Hurdis in 1853, in a collection of Bermuda skins sent to him for examination; and two others seen by myself, one being shot near Devonshire Swamp on October 19th, 1874. My bird proved to be a male in brilliant plumage; the other, probably a female, escaped. The two were fluttering and creeping about at the extreme end of a large cedar branch, like a veritable *Parus*.

Protonotaria citreæ, Prothonotary Warbler.—I had the pleasure of examining and identifying a specimen of this handsome warbler, the only one yet obtained, in Mr. Bartram's collection. It was presented to him by Mr. Hyland, jun., of St. George's, who shot it, near that town, out of a small flock of the species, in the autumn of 1874.

Dendroëca æstiva, Blue-eyed Yellow Warbler.—Mr. Bartram has two specimens, obtained at different dates, the only ones on record. It is somewhat strange that this abundant and prettily-coloured North American species should not have been a more frequent visitor, or rather more frequently observed. Doubtless it *has* found its way to Bermuda, like others of the genus, to a much greater

extent; but the cedar groves of the islands afford an almost impenetrable shelter to such birds, and, besides, no one but the most ardent collector thinks it worth while looking after them. [Two birds of this species, both males, shot in Devonshire Swamp on November 23rd, 1875, are now in my collection.—H. D.]

Dendroëca virens, Black-throated Green Warbler.—Another novelty brought to light in examining Mr. Bartram's birds. He has three examples, one in the obscure plumage of youth, the others in the "fall" or female plumage of the adult. Unfortunately, Mr. Bartram has sexed none of his birds; the bodies, in fact, of all specimens under six inches in length are left within the skin (the "tail" only being removed), and preserved by being thoroughly saturated with a wonderful mixture of the old gentleman's own composition. This certainly keeps the birds from decay and insect ravages most effectually, but I cannot say it conduces to their appearance; the bodies dry slowly and surely, and thus contract the plumage of the breast and abdominal region to a deplorable extent.

Dendroëca cærulescens, Black-throated Blue Warbler.—Two specimens of this striking-looking Warbler are in the Bartram collection, shot by Mr. Bartram in a field of arrowroot on his farm not many years since. No others are recorded.

Dendroëca coronata, Yellow-crowned Warbler.—Several examples are recorded in "The Naturalist in Bermuda." Three of these were shot on Somerset Island by Captain Tolcher, 56th Regiment, out of a flock of more than a hundred birds. In the Bartram collection are four specimens. It was the commonest species I met with in November and December, 1874, in the course of my evening rambles among the cedar groves of Devonshire parish. Here I obtained a few specimens, and could have shot many more had I wished. They were rather shy, and flew rapidly from tree to tree, with a loud "chip" of alarm, showing the brilliant yellow of the rump plainly. Those I shot were all in winter plumage, the yellow crown concealed by brown feathers.

Dendroëca castanea, Bay-breasted Warbler.—A young bird in the Bartram collection is the sole representative of the species. It is in obscure plumage, but shows the buffy tint on the sides of the body so characteristic of the species.

Dendroëca discolor, Prairie Warbler.—Only one, obtained by Major Wedderburn at the dockyard, Ireland Island, on the 3rd October, 1848.

Dendroëca palmarum, Yellow Redpoll Warbler.—Two shot by Major Wedderburn in Pembroke Marsh, on December 17th, 1847, and December 3rd, 1848, respectively. Mr. Bartram has two other specimens.

Dendroëca pinus, Pine-creeping Warbler.—Has occurred in considerable numbers. A good many occurred on September 27th, 1849, departing again in a few days. Several were captured outside the lantern of the lighthouse in the dark and rainy night of the 5th September, 1850. On October 15th, 1850, Colonel Drummond obtained specimens from a large flock, which he observed coming in from the sea and settling on some trees within the keep

at Ireland Island. Mr. Bartram has two specimens, one of which (a male in spring plumage), was shot near his house and brought to him while I was paying him a visit on March 16th, 1875. The species would seem, therefore, to visit the islands on both migrations.

Seiurus aurocapillus, Golden-crowned Thrush.—I shot the first recorded specimen on the edge of Devonshire Swamp, on the 19th October, 1874. This brought to light another, shot in the autumn of 1873, and set up in a case with Blue and Red birds by Gibbs, an old soldier of the 53rd Regiment, and an excellent taxidermist, in the service of Lieut. Johnston, R.E. I afterwards identified two others, killed a few years ago, in Mr. Bartram's possession. The species was numerous in the autumn of 1874, in and near Devonshire Swamp, and I procured specimens on the 24th October and on the 12th and 16th December, thus establishing it as a real 'Mudian. I wonder it had hitherto escaped notice; its loud "peche, peche," is very striking, and drew my attention at once to the presence of something new. It was very shy.

Seiurus noveboracensis, Water Thrush.—One of the commonest but most interesting of autumnal visitors. It appears regularly early in October, and a few remain all the winter. Throughout October and November there is hardly a mangrove swamp, great or small, whence its sharp but musical "chip" may not be heard at any time during the day. Early in the morning, especially when an ebbing tide has left bare the quaint tangled roots of the mangroves and their muddy surroundings, it is comparatively easy to approach this wary little bird, but later in the day it requires great caution, and a certain amount of activity, to procure a specimen. To persons out of training, requiring strong exercise, I can confidently recommend a protracted "stalk" after *Seiurus* among the mangrove roots, such as I undertook myself before becoming better acquainted with the habits of the species. These birds wag the tail like a *Motacilla*, as they feed on the edges of the tidal pools, and flit from root to root, uttering at times their loud monotonous cry. While waiting for ducks at daylight in the larger swamps, I have seen them within a few yards of me, in happy ignorance of my presence. Major Wedderburn says (Nat. in B., p. 27), "Several times, at Riddle's Bay, I have noticed seemingly a larger species of this bird, but never succeeded in killing any of them." This was perhaps the larger variety (or species), *S. ludovicianus*. I did not meet with any specimens myself.

Geothlypis trichas, Maryland Yellow-throat.—By no means a frequent visitor, only two specimens being known. The first was shot by Mr. Hurd in a bushy swamp near the sluice-gates on the 18th October, 1853; the second is in Mr. Bartram's museum, obtained near Stocks Point.

Myiodytes mitratus, Hooded Flycatcher.—A male shot at Ireland Island, by Mr. Abbott, 20th Regiment, on March 30th, 1847. The female was seen, but not obtained.

Setophaga ruticilla, American Redstart.—Two in Mr. Bartram's possession, shot by him near his house some few years since. No others are on record.

Pyrranga rubra, Scarlet Tanager.—This handsome bird has visited the Bermudas on its vernal migration on several occasions. Two or three examples were obtained in April, 1850; four were seen, and one shot, in May, 1851. Mr. Bartram has several specimens, male and female, and obtained a splendid male near his house early in May, 1875. One was seen and nearly captured after an exciting hunt by Lieut. Denison, R.E., at Somerset, on April 25th, 1875. Mr. J. M. Jones informs me that a male was shot on the edge of the lagoon at Ireland Island on May 6th, 1869; also that another frequented a garden in Smith's Parish for several days at the beginning of May, 1875. The female is such an obscure-looking bird that she doubtless often escapes the notice invariably accorded to her brilliant partner. There is no recorded instance of the occurrence of this species on its southward journey. Capt. Rooke, 53rd Regiment, and I saw what we took to be a female Scarlet Tanager on October 17th, 1874, near Basden's Pond; but we could not get a shot to confirm our suspicions.

Pyrranga aestiva, Summer Red Bird.—The same remarks apply to this species, with reference to its visits to the islands, as to the preceding. It appears to have been especially numerous in April, 1850, when a female was shot on the 9th; a beautiful male, by Major Wedderburn, at Peniston's Pond, on the 19th; two by the same gentleman, at Harris's Bay, on the 20th; and several others. Mr. Bartram has a male and two females, one of the latter killed a year or two since. On the 29th April, 1875, I shot a fine female in Smith's Marsh; it was in wonderful condition, the body being literally coated with layers of orange-coloured fat. The stomach was full of the remains of the Bermuda wasp—a most unpalatable-looking morsel, I should have thought. Wilson alludes to the insectivorous habits of this species.

Hirundo horreorum, Barn Swallow.—I shall take the liberty of quoting from the "Naturalist in Bermuda," to illustrate the uncertain appearance of the Swallow tribe in the islands. Mr. Hurdis says (p. 68):—"I can with safety affirm that from October, 1840, to September 12th, 1846, not a Swallow of any description came under my observation, though I believe they were sufficiently common in the September of the former year." Major Wedderburn says of this species (p. 34):—"Rarely seen in April and May, but sometimes numerous in August and September. I have seen it as early as August 1st in the year 1848, at Hamilton, and they were numerous on that day at Hungry Bay and Riddle's Bay. This species was very numerous in the great flight of Swallows in September, 1849." A few Swallows, probably of this species, appeared in August, 1874, but I was away at the time. From April 30th to May 11th, 1875, there were not a few visitors, and several specimens were obtained. Five of these birds frequented the grassy slopes in the vicinity of Warwick Camp, while I was going through the annual course of musketry there with my company. They disappeared on May 11th, without my having been able to procure a specimen.

Tachycineta bicolor, White-bellied Swallow.—Has only visited the islands once, in the great flight of September, 1846, when it ap-

peared in considerable numbers. [One in my collection was shot at St. George's, in September, 1875.—H. D.]

Cotyle riparia, Bank Swallow; Sand Martin.—Identical with the European bird. Two specimens were shot by Capt. Lye, in September, 1846; and a few seen near Hamilton on August 8th, 1847.

Progne purpurea, Purple Martin.—This fine bird, a straggler to the British lists, has only, like *T. bicolor*, appeared on one occasion, during the "entrada" of September, 1849, when it was numerous.

Ampelis cedrorum, Cedar Bird.—Occurs rarely, both on its autumnal and vernal flights. Three were shot out of a flock of about thirty, near Hungry Bay, on October 10th, 1847; four on December 17th following, one of which had a few of the brilliant wax-like tips to the secondaries; two out of a flock of twelve in December, 1849; one seen on January 5th, 1850; one shot on the 6th and another on the 10th April, 1850; one on December 2nd, 1851. In addition to these Mr. Bartram has three specimens, obtained at different dates. I did not myself meet with the species, or hear of its occurrence, during my stay. [Two were shot out of a flock of five on the 11th, and a third on the 22nd September, 1875, in Devonshire Swamp, by Lieut. Festing, 20th Regiment. A male bird of this species was obtained near Prospect, on November 24th, 1875.]

Vireo noveboracensis, White-eyed Vireo.—The smallest and one of the commonest resident Bermuda birds, familiar to all through its sprightly ways, loud song, and astounding impudence. It is termed locally, "chick-of-the-village," or, "chick-choo-willio," from its note. This is, however, very variable, and hardly any two birds give it the same rendering. One has a prefatory "chick," in addition; another tacks the extra "chick" on at the end of his version; while others cut it short, or jumble it all up together at random. One particular variety is "ginger-beer-quick," a call very much adapted to the climate of Bermuda. In short, there is no end to the variations; and a stranger might well imagine, as I did myself at first, that there was more than one species present. It was some little time before I settled the matter to my own satisfaction by careful observation of every "chick" I heard singing, as I expected to meet with *V. gilvus* or *V. Belli* among the numerous musicians. The colour of the iris increased my difficulty, as I found it to be brownish, brownish grey, or grey—rarely white, as stated by authors. I presume it is only fully adult birds that show the real white iris; young birds have it decidedly brownish, and I have seen a female sitting on eggs with an undeniable brownish grey "cast" in her bright little eye. It would be a waste of time and valuable space to describe the pretty pensile nest of this species, so familiar to all ornithologists. I have found it usually from three feet to twelve feet above the ground, in cedars, mangroves, Bermuda "holly," pomegranate, and lemon trees, but most commonly in cedars. I never met with more than three eggs or young in one nest; authors assign four or five to the genus. The eggs average .71 in. by .52 in., white, with a few dark brown or black dots; some are entirely white. The young at first have the yellow of the wing bars and forehead very pale and dingy. This is a sad little torment to the collector. It comes hissing and

scolding within a foot of one's head, puffing itself out with malignant fury. I have touched one with my gun in the thick bushes before it would budge an inch. And when one is on the *qui vive* for rarities among the big cedars, the little wretches will come from all parts to irritate and deceive one, playing all sorts of antics on the topmost branches, apparently imitating the movements of a *Dendroica* or other *Sylvicola*, in order to induce one to waste a charge on them. Several times they succeeded with me; and on one occasion, the bird having lodged at the top of a very ugly-looking tree, I tore my hands and clothes to pieces in my anxiety to secure the supposed prize. But in spite of this I have a great regard for the cheerful, restless little fellows, whose presence does so much to relieve the monotony of the everlasting cedars. They are very dexterous in catching insects among the foliage, their manner of feeding seeming to be intermediate between that of a Flycatcher and a Warbler. You can hear the "snip" of their mandibles as they secure their prey for a considerable distance. I have seen one catching flies off the back of a cow, jumping vigorously at them from the ground, and "snipping" them off neatly as they buzzed round the recumbent animal. Mr. Hurdiss says (Nat. in B., p. 71):—"In September it delights to feed on the small white berries of the sweet-scented *Tournefortia*, and it is also fond of the small fiery capsicum, known by the name of "bird-pepper," the pods of which it plucks and swallows entire." It is on record that the newly-fledged young of this species have been found entangled in the meshes of the web of the "silk" spider, *Epëira clavipes*. These webs are of great size and strength, extending for many feet between adjoining cedars, and the number of them among the woods in summer and autumn is almost incredible. In all my rambles, however, I never met with an instance of poor little *Vireo* having walked into *Epëira's* parlour.

Vireo olivaceus, Red-eyed Vireo.—The first I met with was captured in the officers' quarters at Prospect Camp, on October 14th, 1874. In March, 1875, I identified three specimens belonging to Mr. Bartram, all shot by himself near Stocks Point. This bird, though somewhat larger, is sufficiently like its brother, *V. noveboracensis*, to have escaped detection in previous years.

Coluthrio borealis, Great Northern Shrike.—Not a great many have occurred, though it would appear to visit the islands on both migrations. One was shot by Dr. Cole, 20th Regiment, on October 31st, 1846; one by Mr. Hurdiss, January 23rd, 1847; another by Major Wedderburn, near Harris Bay, March 12th, 1850; and a fourth by Mr. J. M. Jones, on the "Model" Farm, Smith's parish, in January, 1872. Besides these there are three specimens in Mr. Bartram's collection. Most of these above-mentioned examples were in immature plumage. [One shot near the garrison instructor's house, at Prospect, on January 1st, 1876, is in my collection.—H. D.] It is strange that the other North American species, *C. ludovicianus*, of more southerly distribution on the continent than *C. borealis*, should not have been observed in Bermuda.

Curvirostra americana, American Crossbill.—Of this species Major

Wedderburn says :—"A specimen of this bird was captured in the dockyard at Ireland Island, January 20th, 1850, and got quite tame, and lived for several days in my room; but poisoned itself by eating part of a composite candle, which it had cut nearly in half with its strong bill during the night. I shot three specimens near Mr. Ewing's house, April 5th, 1850, and saw a small flock on several occasions near Pitt's Bay, but they were so shy I could not get near them. They disappeared early in May." Mr. Bartram has several specimens. On November 17th, 1874, three were observed on some cedar trees at Prospect Camp. Two males were shot among some sage bushes, near the shore at Warwick, by Gibbs, on the 25th of that month; and another male was obtained at Prospect about the same time. These may have been the trio originally seen. The stomachs of the two Warwick birds were crammed with small green caterpillars, and contained no trace of seeds. The insectivorous nature of the Crossbill is not mentioned by Wilson; it is alluded to by Dr. Saxby in the "Birds of Shetland." This species must visit Bermuda both going and returning.

Curvirostra leucoptera, White-winged Crossbill.—A less frequent visitor than the preceding, on its northward journey only. A fine male was killed on May 11th, 1852, by a boy who had another in his possession; date unknown. An officer of the 56th Regiment shot one, a female, at Somerset, in March, 1852. Mr. Bartram has obtained a pair, male and female. This bird has occurred several times in Great Britain, and it is somewhat remarkable that the preceding species, *C. americana*, has not yet paid us a visit. I expect it will find its way across the Atlantic some day, and share the fate of every unfortunate straggler to our inhospitable shores.

Ægiothus linarius, Redpoll Linnet.—Only recorded previously in 1847 and 1850. Two were obtained, February 8th and October 11th, in the former year. In March, 1850, flocks of this bird appeared in the neighbourhood of St. George's, and several specimens were obtained there and elsewhere throughout the islands. A goodly number visited the islands in small flocks in January, 1875: these were very tame at first, but soon became shy. Specimens were obtained during the month at all parts of the islands.

Chrysomitris pinus, Pine Linnet.—Two specimens in Mr. Bartram's collection are the only ones on record. They were obtained near Stocks Point.

Plectrophanes nivalis, Snow Bunting.—This is a pretty constant visitor, seldom failing to make its appearance, in large or small numbers, in December or January. They were particularly numerous in 1850. I am credibly informed that of late years they have been seen in considerable numbers feeding on the parade ground and round about the stables, like sparrows, at Prospect Camp. One was seen there in December, 1874. Three, of which I procured one, frequented the Walsingham end of the Causeway in January, 1875. Others were seen at St. George's and elsewhere about the same time. This bird has not appeared in spring.

Passerculus savanna, Savannah Sparrow.—Only two on record. Major Wedderburn killed one in Pembroke Marsh, April 11th, 1850; I shot one at Shelly Bay Marsh on January 29th, 1875,

Pooëcetes gramineus, Bay-winged Bunting.—One shot by Capt. M'Leod at St. George's, October 25th, 1849. [I saw several and shot one of them at Whale Bay, September 9th, 1876.—H. D.]

Coturniculus Henslowii, Henslow's Sparrow.—“Mr. Hurdis shot one specimen out of a small flock of these birds in Pembroke Marsh, on December 2nd, 1850. They had frequented the dense reeds and rushes for a fortnight previously.” (Nat. in B., p. 30.)

Melospiza palustris, Swamp Sparrow.—A solitary example was obtained in Pembroke Marsh on December 3rd, 1849. I saw a bird in the Shelly Bay Marshes in January, 1875, which I am almost certain belonged to this species, but I could not get a shot.

Junco hyemalis, Snow Bird.—Two in the collection of Mr. Bartram, were shot by him at Stocks Point.

Passer domesticus, European Sparrow.—Some few years ago a number of these birds were imported from New York (where they are now numerous), and turned out at St. George's; but many of them subsequently disappeared, probably victims to the cats, which swarm in all parts of the islands. The remainder, however, appear to be flourishing, and in the spring of 1875 there were several nests in the new barracks above the town. A second importation, from New York also, took place in September, 1874, about fifty birds being liberated in the vicinity of Hamilton. These soon scattered in all directions, but about a dozen took up their quarters in the garden of the Court House at Hamilton, and could be seen there daily during the winter following. I have no doubt they will increase and multiply after their manner, and in time become as much a nuisance as they are now a curiosity. I certainly question the propriety of introducing these quarrelsome birds (for the sake of the war they wage on the insect tribes during the breeding season *only*) into the aristocratic society of the Blue and Red Birds, which they will infallibly drive in course of time out of the town gardens and enclosures altogether. I observed a single specimen of the European Goldfinch, *Carduelis elegans*, near Harrington Sound, in April, 1875; it was very wild, and I could not get near it, but I imagine it must have been an escaped prisoner. This species is reported to have occurred in Massachusetts (Allen, Am. Nat. iii. p. 635), but the same explanation doubtless applies.

Passerella iliaca, Fox Sparrow.—Only one yet obtained; shot by Mr. Bartram in a bush near his house a few years since.

Goniaphea ludoviciana, Rose-beaked Grosbeak.—A female bird of this species was shot by Colonel Drummond on the 9th October, 1849, near St. George's, and a fine male by Mr. Hurdis on the 15th April, 1850. Mr. Bartram has four specimens, one of which is a male in immature plumage. A female was caught by a cat in the town of Hamilton on the 16th October, 1874. The species appears to visit Bermuda twice.

Cyanospiza cyanea, Indigo Bird.—I had the pleasure of introducing this species into the Bermuda lists, the first specimen being a female shot near Devonshire Church, on January 14th, 1875. In March following I examined an immature male, shot by Mr. Bartram on the 1st of that month, and also unearthed two dingy female specimens in his collection, killed some years previously.

I obtained a female in Devonshire Marsh on the 8th, a young male on the 11th, and another on the 22nd of March, and one or two others were subsequently procured in the same locality. There appeared to have been a regular "entrada" of them, and it was remarkable how pertinaciously they stuck to certain cedar groves round about Devonshire Church. I saw many others, and watched the changes of plumage of the male birds with great interest. By the end of April they had acquired the rich blue livery of the adult, and rivalled the Blue Bird in brilliancy of colouring. Lieut. Tallents, of the 20th Regiment, shot a splendid specimen on April 29th. This was the last we saw, and I imagine they all departed shortly afterwards, though we fondly hoped they might stay to breed. I found them easily approached at first, but when once disturbed they flew very rapidly away into the thick cedars. Their call-note was a loud, harsh "chee" or "tzee."

Cardinalis virginianus, Cardinal Red Bird; Virginia Nightingale. —The well-known Red Bird of Bermuda is an abundant resident throughout the islands, everywhere conspicuous by its brilliant plumage and loud but not unmusical song. This bird is a general favourite with all classes, and in great esteem as a cage-bird. Formerly considerable numbers were caught by the "coloured" boys in the neat trap depicted in "The Naturalist in Bermuda"—an introduction, as I am informed, by Mr. J. M. Jones, from Somersetshire, and not a 'Mudian invention. Fortunately, however, there are now stringent local laws for the protection of the resident birds, and these traps are seldom seen. I have tried in vain to bring up the young from the nest. The Red bird breeds twice a year in Bermuda. Fresh eggs have been found as early as the 1st April, and I find in my notes that I saw young birds just able to fly on the 19th; but these are exceptional cases. As a rule, the two clutches of eggs are deposited about April 10th and May 30th respectively. The eggs are three to five in number, averaging 1.00 in. by .73 in. They vary much in size and markings, but are usually greenish white, irregularly marked with few purplish and many amber blotches. The nest is bulky, built of twigs and roots, lined with dry grasses. This lining alone serves to distinguish some of the nests from those of the Cat Bird, which they much resemble; they are usually at a greater elevation, however, and are never ornamented with rags or paper. The parent birds are extremely solicitous in bringing up their offspring, and attend them assiduously long after they are able to fly, betraying their anxiety by much "tick-tick-"ing, flirting of tails, and raising of crests. To see a fine old paterfamilias in all the glory of his rich vermilion garments, tail and crest in air, now on a post, now on an oleander or cedar bough, all the while uttering his sharp "tick" of alarm, while the more sober-coloured mother is ministering to the appetites of the children, is a great treat, and will ever be associated in my memory with the hot sun, the white houses, dark cedars and fragrant sage-bushes of Bermuda. The young resemble the female, being ashy-brown, paler below, with evident traces of the red on the crest, wings, tail, and under parts. I have mentioned the "tick," or call-note of this species. The song is

exceedingly variable, consisting of a series of musical whistles. There is also a strange "whir-r-r-r," like a large bird suddenly rising on the wing, which is very peculiar. A most remarkable fact is that the notes are changed according to season. Mr. J. M. Jones called my attention to this, too late, unfortunately, for me to make any lengthened study of the changes; but I heard sufficient to satisfy myself of their occurrence. Thus, in December and January, nearly every songster I listened to was "way-too-" ing at the top of his voice, and I occasionally heard the peculiar "whir-r-r-r." Later on "way-too" became less frequent, being replaced by the monotonous "tew, tew," and other notes. A more careful and lengthened series of observations would be of considerable interest. In spring the Red Bird commences to sing at daybreak, considerably before the Blue Bird. A wounded Red Bird can give the unwary collector a most painful nip with his strong beak. In spite, however, of his strength, he allows himself to be driven ignominiously from his nest by the smaller Blue Bird, as already mentioned. The skin of this species is remarkably delicate, almost resembling tissue-paper. The rich vermilion plumage soon fades when exposed to light.

Dolichonyx oryzivorus, Bob-o-link; Rice Bird.—Mr. Hurdis says of this bird:—"The Rice Bird is not known to visit the Bermudas on its vernal flight, although in September and October it seldom fails of being found there, generally in small flocks, and on one occasion in considerable numbers. They frequent the marshes, where the ripe panicles of seed from the reeds and sedge offer an ample abundance of their favourite food." And Major Wedderburn remarks:—"During some years this bird is not uncommon, but always found in winter plumage. They are so extremely fat that it is almost impossible to preserve them." I have little to add to the above notes, except that one of Mr. Bartram's specimens is a male in imperfect summer plumage. I never met with the species myself, but they were familiar to many of my friends. They did not visit the Bermudas in the autumn of 1874. [In September, 1875, they were numerous.—H. D.]

Molothrus pecoris, Cow Bird.—In Mr. Bartram's collection there is one example of this singular bird, which takes the place of our European Cuckoo in North America, building no nest, but depositing its eggs by stealth in the nests of Warblers, *Vireos*, Sparrows, &c. This solitary specimen is a male. It was shot at Stocks Point by Mr. Bartram.

Icterus Baltimore, Baltimore Oriole; Golden Robin.—"Captain Tolcher, 56th Regiment, shot one of these birds early in October, 1854, at Somerset. Mr. Hurdis found it amongst his collection of skins on the 20th of the same month, when Capt. Tolcher assured him that Mr. Harford, of his regiment, had killed another specimen about the same time, which, from being very much mutilated, he had unfortunately thrown away" (Nat. in B., p. 27). A third example, a male in splendid plumage, is in my own collection. I shot it near Hungry Bay, on April 28th, 1875. The bill and feet of this bird were bright livid blue.

Corvus americanus, American Crow.—The early history of this

bird, so far as the Bermudas are concerned, is somewhat obscure. In Smith's "History of Virginia" (to which colony Bermuda at one time belonged), date 1623, Crows are mentioned as being numerous in the islands. Major Wedderburn says, however (Nat. in B., p. 33):—"A few of these birds are generally to be seen between the lighthouse and Hamilton. I have never found their nests, but they are known to have bred, as a few young Crows were observed near Warwick Church during the first week of April, 1849. It is supposed that they were introduced from Nova Scotia some few years ago." Mr. Hurdis did not, apparently, find the species numerous, for he says (Nat. in B., p. 66):—"In August, 1854, eleven of these Crows were observed associating together at Gibbs Hill, by the late Colonel Oakley, 56th Regiment. This was double the number which had hitherto frequented those parts, and arose, doubtless, from the young of that season." It is somewhat difficult to reconcile the above evidence. Can the species, once numerous, have become extinct, and have then been introduced again? This is possible, but I am inclined to the belief that there have been Crows, more or less, in Bermuda since 1623, their wary nature and their partiality for the dense cedar groves causing them to have been but little noticed. However it may be, they are numerous now; so much so that a price has been set on their devoted heads by a recent enactment—half-a-crown a bird, and sixpence an egg. That this is a wise and necessary measure is universally conceded, as they do much damage in the breeding season, by destroying young poultry, and the eggs and young of the other resident birds. As is well known, this species is gregarious, except during the actual time of breeding. As soon as the young are well able to fly, the scattered families consort together. I have seen as many as sixteen in one flock in June. Three or four are commonly seen together in winter, when they frequent the rocky shores in search of shell-fish, &c. At the approach of the breeding season they separate into pairs, and select the most retired cedar groves for their nesting places, the same couple resorting to a particular spot for many years, if undisturbed. The nest is a bulky structure of sticks and cedar-bark, warmly lined with the latter material and with goats' hair; it is usually in a wide fork, against the trunk, and never very high up. Eggs, usually four, exactly like those of our European Crows. I have found as many as half-a-dozen nests, in various stages of dilapidation, in the same clump of trees—the work, doubtless, of the same pair. They seem invariably to build a fresh one every year. Only one brood appears to be raised, leaving the nest about the end of May. The earliest nest I heard of was one containing four fresh eggs, on April 3rd, 1875. Lieut. Denison and I found five young birds in one nest, two of which were somewhat less advanced in feathering than the remainder; and, as we were mobbed all the time we were at the nest by four old Crows, we came to the conclusion that the nest must be common to both pairs—rather an odd thing, when one considers the solitary breeding habits of the species. Mr. Bartram has a specimen measuring $21\frac{1}{2}$ inches in length, which we at first thought must be a Raven, *C. corax*,

particularly as it did not mix with the other Crows, and was shot on a small island it frequented; but subsequent examination inclined me to believe it was only an unusually large bird, perhaps a little stretched in stuffing—probably the variety *C. floridanus* of Baird. Ordinary specimens measure 18 to 20 inches.

Tyrannus carolinensis, King Bird; Bee Martin.—Recorded as very numerous in all the swamps in 1850, but not mentioned as occurring at other times, though Mr. Bartram has one or two specimens of a later date. It would appear to be only a spring visitant. A considerable number appeared in April, 1875, a small band of these attaching themselves to the Devonshire and Hungry Bay district, where several specimens, male and female, were obtained. These were all immature, or rather in winter plumage, with the flame-coloured head-patch concealed by black tips to the feathers. [Several were seen by me at Hungry Bay on the 22nd September, 1875. Unfortunately I did not procure a specimen, and so establish the fact of this species visiting Bermuda on its southern journey.—H. D.]

Tyrannus dominicensis, Grey King Bird; Pipiry Flycatcher.—Only three specimens are on record, viz., one obtained by Major Wedderburn in Mr. Hurdis's garden on March 30th, 1850, and two others on St. David's Island on April 15th, 1850.

Contopus borealis, Olive-sided Flycatcher.—Mr. Bartram has one, shot by himself on his farm not many years since.

Contopus virens, Wood Pewee Flycatcher.—A single example was obtained by Mr. Hurdis on April 30th, 1852.

Empidonax Traillii, Traill's Flycatcher.—One specimen is in Mr. Bartram's collection, shot at Stocks Point.

Chordeiles virginianus, Night Hawk.—I cannot do better than quote from "The Naturalist in Bermuda" the following:—"These curious birds are sometimes very common in April, and also in September and October on their migration north and south. The marsh below Government House was their great resort, when, just as it was getting dusk, they would appear one by one, and soon be skimming about in all directions, uttering every now and then a sharp whirring sort of cry. They double and rush about in a most wonderful manner, frequently depressing first one side, then the other. Although flying close together, they seem to try and keep apart, each having seemingly its own hunting ground" (Wedderburn). "When this bird visits the islands of Bermuda from the north, it invariably appears between the 20th of September and the 11th of October, and, on its vernal flight from the south, arrives with wonderful precision between the 23rd and 30th of April" (Hurdis). Individuals of this species were observed by officers of Prospect Garrison on February 20th and 28th, 1875. It would almost seem probable that these wintered in Bermuda; but the question requires further investigation. They are occasionally picked up dead or in a dying condition. One was found dead in the streets of St. George's on the 26th April, 1875, and a live one was brought to me the same day. The stomachs of several examined in October, 1874, contained numbers of the highly-perfumed "green bug," *Rhaphigaster prasinus*, so obnoxious to delicate olfac-

tory nerves. For this good service alone the poor birds should be religiously protected during their short visits.

Chæturia pelagica, Chimney Swift.—One was shot on the 13th September, 1849. On the 24th of that month Mr. Hurdis noticed several, left behind after the great flight of the Swallow tribe, already alluded to, had taken its departure. Mr. Bartram obtained one in September, 1874; but I did not meet with the species myself.

Trochilus colubris, Ruby-throated Humming Bird.—I found the history of this bird's occurrence in Bermuda in a very unsatisfactory state. Major Wedderburn writes: "There is a tradition that the Humming Bird visited the islands of Bermuda in considerable numbers about thirty years ago; but of late years they have not been noticed till the 26th April, 1852, when Mr. Hurdis wrote to me, saying that Mr. John Darrell (son of the Attorney-General, now Chief Justice, of those islands) had seen a Humming Bird under the windows of his father's house, where it was busily employed entering the large white bell-shaped flowers of the giant *Stramonium*, its tail only at times being visible. Another was seen about the same time, and within about two miles of the same place, by a Miss Watson, in her brother's garden." Referring to the above, Mr. Hurdis says:—"My endeavours to ascertain the truth of the tradition alluded to by Major Wedderburn ended in disappointment. The bird seen by Mr. Darrell was described to me as greenish in colour, with the tail—the only part visible at times—tipped with white. I need not observe that this characteristic appertains to the female." I was, therefore, much pleased to establish its occurrence beyond a doubt, when going through Mr. Bartram's collection with him. He has a genuine female specimen, shot with powdered rice by himself close to his house, his attention having been called to the diminutive stranger by one of his labourers, who thought it was a large moth. Two others were seen at the same time, but not obtained. How these little birds got to Bermuda is a marvel. They have powerful wings for their size, calculated to keep up that humming vibratory motion necessary for their mode of feeding; but one would think that such a long flight across the sea would induce weariness in so small a frame, and leave them at the mercy of the wind and waves.

Ceryle alcyon, Belted Kingfisher.—"These birds arrive regularly about the middle of September, and are to be found in all the mangrove swamps, creeks, and ponds in the islands. Many remain during the winter, but they all disappear about the middle of April" (Nat. in B., p. 33). I have seen these birds as late as the 26th April, and at one time thought they must occasionally remain to breed; but after much careful watching, in which I was assisted by my friends, I came to the conclusion that they all depart, sooner or later, to breed on the North American continent. Hungry Bay is a favourite resort of these fine birds. I have seen six or seven there together, chasing one another, darting at the little fish in the pools, and uttering their harsh, rattling cry. They affect the same hunting grounds, especially those birds that remain for the winter, and day after day, as one drives past the creeks and sheltered bays,

one sees the same solemn-looking individual on the accustomed rock or cedar-bough, one eye on the fish in the water below, the other on the passers by.

Coccyzus erythrophthalmus, Black-billed Cuckoo.—The first example recorded was shot by Gibbs early in October, 1874, at the same time as a number of the succeeding species, *C. americanus*, from which its smaller bill, less white on the tips of the tail-feathers, and red ring round the eye, at once distinguish it. Mr. Bartram also obtained a specimen that autumn, and I found two others in his collection, labelled *C. americanus*. I saw one near Devonshire Bay on the 19th April, 1875, and one (probably the same) was brought to me on the 30th of that month from Hungry Bay. Lieut. Hopegood, of the 97th Regiment, shot one of a pair in a potato-field near Devonshire Bay on the 8th May, 1875. I imagine this species has occurred more frequently than the records tend to show, not having been distinguished from its larger-billed congener.

Coccyzus americanus, Yellow-billed Cuckoo.—A few specimens only are recorded previous to the 9th October, 1849, when an extraordinary invasion took place. Thousands of these birds suddenly appeared in all parts of the islands, most of them departing as suddenly the next day. A few were seen in April, 1852. They were numerous from the 12th to the 15th of October, 1874, and a few remained behind for some time. I shot one near Devonshire Bay, in a potato-field, on the 7th November: its stomach (like that of other specimens examined) was full of green caterpillars collected from the leaves of the potatoes. I was very angry with myself for having killed the poor bird when doing such good service.

Sphyrapicus varius, Yellow-bellied Woodpecker.—Of this species Major Wedderburn says:—"In general not very common. I first saw it in December, 1847; again in November, 1848; and in April, 1850, a great many suddenly appeared, several of which I shot. Many of the palmetto trees are bored by this bird. It breeds in Mr. Ballinghall's garden every year, and I should think that a few also breed in holes in the large trees at Brackish Pond; and in some of the other large swamps." Three examples occurred during my stay, but I could not ascertain whether they bred or not in 1875. I don't think they did so in Brackish Pond, where I kept a careful watch for them. Mr. Bartram has about a dozen specimens, scarcely two of which are alike, so variable is the plumage of the species. They are all in immature dress, with the crimson patches more or less replaced by mottled grey, but all possess the characteristic "yellowness" which distinguishes the bird from nearly all the other American *Picidæ*.

Colaptes auratus, Golden-winged Woodpecker; Flicker.—The only specimens ever obtained were shot by officers of the 61st Regiment in Devonshire Marsh, as my friend Mr. J. M. Jones informed me. One or two were shot, in 1871 I think, but no others are on record.

Otus Wilsonianus, Long-eared Owl.—This near ally of our European *O. vulgaris* has occurred frequently, but irregularly, during

the winter months, generally on the highest part of the islands, near the lighthouse. One in Mr. Bartram's collection was caught alive at Mount Langton a few years ago. This bird did not, to my knowledge, visit Bermuda during the year 1874-5.

Brachyotus palustris, Short-eared Owl.—Not so frequent a visitor as the preceding; but, like it, appearing in the autumn and winter months, and usually seen on the south side, near the lighthouse. The attraction presented by that part of the islands would appear to consist of a plentiful supply of mice, which inhabit the sandy scrub-covered hills near the shore.* Mr. Bartram has two specimens of this Owl, and I obtained two myself during my stay—one at the Sand Hills, and another in Warwick Swamp.

Syrnium nebulosum, Barred Owl.—Mr. Hurdis observed one of these birds on the 2nd April, 1851.

Nyctea nivea, Snowy Owl.—Major Wedderburn observes (Nat. in B., p. 25):—"Lieut. Fayer, R.N., shot two specimen's at Boss's Cove in the autumn of 1843. Another, a fine female specimen, was shot by a person named Llewellyn, at Ireland Island, on the 29th November, 1853: this bird was only wounded, and when examined by Mr. Hurdis, on the 13th December following, appeared lively and well. When being fed, it frequently erected a little tuft of feathers on each side of the head, so as to resemble small horns." No other examples are recorded. [Two frequented the islands in the autumn of 1875. One of these was shot by Lieut. Tallents, 20th Regiment; the other escaped, though it remained two months or more.—H. D.]

Surnia ulula, var. *Hudsonica*, Hawk Owl.—A single specimen was "seen by Col. Drummond at St. George's, quite close to him, on a Sunday afternoon, otherwise it would have been shot" (Nat. in B., p. 55).

Nyctale acadica, Acadian Owl; Saw-whet.—A rare straggler. Major Wedderburn's notes contain all the information we possess. He says (Nat. in B., p. 25):—"Only one specimen, found on the 12th January, 1849, sitting inside the muzzle of one of the guns at Ireland Island by an artilleryman. It is to be hoped that the said gunner has more nerve when working a gun than he displayed on finding the little bird, being afraid to catch it, as he said 'it glow'ed at him.' It was caught by a man of the 42nd, and lived in my room for several days, getting quite tame. At night it always became restless, and finally killed itself against the wires of the cage. Mr. Harry Tucker saw another some short time afterwards, in a cave on the south shore."

Circus cyaneus, var. *Hudsonius*, American Marsh Hawk.—Whether this bird be a good species, or merely a climatic sub-species, race, or variety, I am at a loss to understand, so conflicting are the opinions of naturalists on the question. I have, however, Dr. Coues's authority for the name above assigned to it, which

* I saw many of these little quadrupeds, but never succeeded in capturing one, to my great regret, as I fancy they differed from the ordinary *Mus musculus*.

designates it as a geographical variety of our European Hen Harrier, *C. cyaneus*. It is occasionally seen in Bermuda in the autumn. One was shot by Mr. Pooley, 20th Regiment, in 1845, and one by Mr. Hurdis in December, 1851. Mr. Bartram has a male and two female specimens. As might have been expected, he was somewhat unwilling to believe that they were of the same species. A female was picked up dead in Warwick parish in November, 1874, by a "coloured" boy, who showed it to me, too late for preservation unfortunately.

Accipiter fuscus, Sharp-shinned Hawk.—Major Wedderburn has a specimen in his collection, shot near Peniston's Pond on the 23rd February, 1853, and Mr. Bartram has another, shot by himself near Stocks Point.

Astur atricapillus, American Goshawk.—I examined two specimens in Mr. Bartram's collection, the only ones that have occurred. One is a fine adult, shot on Somerset Island some twelve years since; the other is in immature plumage, with the close barring of the under parts only just commencing to appear on the thighs.

Falco communis, Peregrine Falcon.—This bird, which Bonaparte separated from the European "*communis*" or "*peregrinus*," under the name "*anatum*," has now been restored, on the authority of Schlegel and other distinguished ornithologists, to its original position. It is a rare visitor to Bermuda. One was killed in 1846 by Dr. Cole, 20th Regiment. Another was wounded and taken alive by a coloured man on the 1st February, 1850, and presented to Mr. Hurdis, who kept it for several months. A third was also captured, after a revolving gale, at the dockyard. I never saw this grand bird alive while I was quartered in the islands, but I examined a specimen in Mr. Bartram's collection, and another, in the flesh, shot by Lieut. Tallents, 20th Regiment, at Peniston's Pond, on the 10th October, 1874.

Falco columbarius, Pigeon Hawk.—A frequent visitor, always in the autumn and winter months. Hardly a year passes without a few stragglers appearing. I saw one flying over Devonshire Swamp on the 2nd November, and obtained a beautiful male from the same place on the 3rd December, 1874.

Falco sparverius, American Sparrowhawk.—Only one recorded, shot near the Sluice Ponds on the 9th December, 1853, while in the act of pouncing on some chickens (Nat. in B., p. 24).

Buteo borealis, Red-tailed Buzzard; Hen Hawk.—Mr. Bartram has one specimen, an adult with fine chestnut tail, shot at Baylis's Bay, about twelve years ago, by a man named Hollis, who is still residing in the islands. About the same time a nest of this species containing young is said to have been found in the cliffs of Harrington Sound, but what became of this nest and its occupants history sayeth not. I see no reason to doubt the story, especially as it is corroborated by an authentic specimen of the bird; but I unfortunately did not see the man Hollis, as I meant to have done. Large hawks are mentioned as common in Bermuda by the old historians, and this species may have once been resident and numerous. The high cliffs on the north side of Harrington Sound offer great attractions to raptorial birds.

Archibuteo lagopus, var. *Sancti-Johannis*, Rough-legged Buzzard.—A dingy old specimen in Mr. Bartram's possession, covered with dust and cobwebs, and with all the quills and tail-feathers nibbled off short by rats, appears to belong here. Its measurements and fully-feathered tarsi are, I think, unmistakable. The bird was originally dubbed an "Eagle." It was shot near Prospect Camp by a medical gentleman, who gave it to Mr. Bartram.

Pandion haliaëtus, Osprey.—The movements of this cosmopolitan species in Bermuda are somewhat mysterious. In 1874 I saw the first on April 22nd; in 1875 one was observed on the 17th of that month. During May they are often to be seen, especially about the Great Sound, along the south shore, and at Peniston's Pond; but whether these are old or young birds I cannot say, as I religiously abstained from shooting one. During the summer months I lost sight of them, though I believe they were occasionally observed; but in autumn I met with one or two specimens. On May 2nd, 1875, I watched for some time two of these fine birds circling over Devonshire Swamp. This gave rise to the question, "Do they breed here?" I took eggs in Southern Spain, slightly incubated, on March 29th, and, there being but little difference of latitude between the two places, it would be only natural to suppose that, if they were going to nest in Bermuda, they would have arrived earlier. Probably, therefore, they are young birds from early nests on the southern continent, or Gulf of Mexico. I could hear nothing of nests in former years. I must leave the question to be solved by future visitors to the islands.

Haliaëtus leucocephalus, White-headed Eagle; Bald Eagle.—"Uncle Sam's bird" has only once been known to favour Bermuda with a visit. He was not obtained, but was well seen by Mr. Hurdis and by other witnesses.

Cathartes aura, Turkey Buzzard.—A male of this ill-favoured species appeared during the yellow fever epidemic of 1853. Was its coming accidental, or did some marvellous instinct lead it there? It was shot in the latter part of November, and subsequently examined by Mr. Hurdis.

Ectopistes migratorius, Passenger Pigeon.—Major Wedderburn records that one was seen by Dr. Cole; but no date is given. Mr. Bartram shot one as he lay on a sofa in his museum with "broken-bone" fever, on October 24th, 1863: it was sitting on a tree close to his house. My friend Mr. J. M. Jones was informed by Mr. J. H. Trott that, previous to 1831, small parties of these birds were resident in the islands, breeding in the caves at Walsingham and along the south shore; but I am inclined to think, with all deference to the authority given, that these must have been escaped "Blue Rocks" from dovecotes in the islands.

Zenaidura carolinensis, Carolina Dove.—Specimens are recorded in "The Naturalist in Bermuda." One was shot by Capt. Harvey on March 20th, 1850; and another was taken alive at Spanish Point on October 30th, 1854. I saw one at the Sand Hills on November 5th, 1874. A small flock frequented the fields near Whale Bay all through the winter of 1874-5, and specimens were obtained, one by Lieut. Hussey, R.E., on February 11th, 1875. I hear from

Lieut. Denison that two have been seen as late as June 20th last. Can they have remained to breed? These pretty birds are fond of associating with the next species, feeding with them on the newly-turned fields—conspicuous when the flock is disturbed by their larger size and long tails. Their flight is very strong and rapid.

Chamapelia passerina, Ground Dove.—Resident and abundant. It nests twice, laying two white eggs, .85 in. by .64 in., in a small, flimsy construction of twigs and cedar bark, generally placed on the bushy horizontal bough of a cedar tree, from eight feet to twenty feet above the ground. The earliest eggs I saw were on April 4th, the latest on June 27th; but there are instances of its breeding even in the winter months. When disturbed from its nest it falls like a stone to the ground, where it commences to flutter about, as if in the agonies of death, to deceive the intruder. Should the latter be taken in by the good acting of the poor little bird, and attempt to seize her, she shuffles away along the ground just out of reach, further and further from her nest, and, when she thinks her home is safe, away she dashes into the trees with a joyful “whir-r-r-r” of relief. My terrier used to be completely “sold” in this way, and had many an exciting but fruitless chase after the little doves. The “coloured” people have an absurd superstition about this bird, and say that when it utters its “coo-oo” (this is an extraordinarily loud and sonorous call for so small a bird, and can be heard a long distance), it is scratching up the ground for somebody’s grave! The habits and mode of feeding of the species are too well known to need description. The male is larger, and has the sides of the neck and the under parts of a much warmer purplish red than the female.

Ortyx virginianus, Virginian Partridge or Quail.—This bird, known to us on this side of the Atlantic as a comparatively recent introduction, under the name of Virginian “Colin,” is the game-bird of Bermuda; but whether it originally found its way there from the American continent without the agency of man is doubtful. It is not mentioned by the old historians. It is certain, however, that, though common some few years previous to 1840, it became extinct in the islands from that year till 1858 or 1859, when, thanks to the enterprise of Mr. Richard Parrell, an importation took place from the United States. Several pairs were turned out, and these, increasing rapidly, soon spread over the islands to such an extent that the species may now once more be considered common. The manners and customs of this handsome bird are too well known for me to venture on details. From my notes, however, I extract the following, which may prove of interest. It is extremely prolific. Mr. Samuel Harvey told me of a nest near his garden containing eighteen eggs, every one of which hatched off; there are seldom less than twelve eggs in a nest; they sit in the cedar trees on wet days, and during the mid-day heat, roosting there at night. When once flushed they are very hard to put up a second time, even with good dogs, being able, according to popular superstition, to conceal their scent at will; they run rapidly, and squat closely in the thick sage-bush, the strong smell of which is calculated to puzzle a dog. Their call-note is triple, “hoo-woo-wooit,” the “hoo” indistinct

and audible for a short distance only. I don't think "Bob-White," the familiar American name, fairly represents the call; it is too sharp and well-defined. These birds are fond of the ripe berries of the sage and cedar; the latter give the flesh a decidedly unpleasant aromatic flavour. They also eat the sweet potatoes in small pieces. Great numbers of the young are destroyed by the swarm of cats which infest the islands. An old "coloured" lady once accosted a gallant officer of the 53rd Regiment, who was beating some likely ground near her cottage, and asked him what he was looking for. "Partridges!" cried she, with a sneer on her sable features, "I don't want a gun to get them. Why! my cat brings me in one every morning!" Cats, however, are not the only foes to be dreaded. The "coloured" sportsmen take the eggs and eat them, while a white "sportsman" resident on the islands was once overheard to say, "It's all very well for the officers; they get lots of practice—can shoot Partridges at any time—but the only time I can get them is when they have nests, and I can kill the old birds." No wonder the poor birds are kept down, and increase with lamentable slowness. If it were not that they are so hard to put up and shoot in a workmanlike manner (two brace being quite a "bag" in one day) their extermination would be a matter of a few years only.

Squatarola helvetica, Grey Plover.—Unlike the next species, this is by no means a frequent visitor to the Bermudas. One was killed, and another seen, by Major Wedderburn at Mangrove Bay in September, 1848. I shot one on the beach below the Sand Hills on the 5th, and another near Warwick Camp on the 13th November, 1874. Both these birds were alone.

Charadrius virginicus, American Golden Plover.—Dr. Coues is of opinion that the American bird cannot be specifically separated from the Asiatic *C. fulvus* (an undoubted specimen of which has been recently obtained in the Prybilov Islands). It can always be distinguished from our European *C. pluvialis* by its grey axillaries. An excellent account of the appearances of this species in Bermuda is given by Mr. Hurdis (Nat. in B., pp. 71-77), who goes carefully and thoroughly into the question of its wonderful migrations. Major Wedderburn says (p. 36), "During some years large flocks of these birds pass over the islands in the months of September and October; but, unless in stormy weather, they do not alight in any great numbers. I have seen it as early as the 21st August, 1847, at Ireland Island; again on the 25th July, 1848, at Hamilton. The latter was a single bird sitting on the road close to the house in which I lived; but by the time I got out it was gone. On the 9th March, 1852, one was shot in beautiful plumage, on the north shore; and this is the only instance of its appearing in spring." Numbers appeared in September, 1874, frequenting the grassy slopes of the north shore—their favourite haunt—and even the parade grounds, during the continuance of a three days' revolving gale. Many were shot, all in the mottled dress which procured for the species the specific name "*marmoratus*." Small flocks continued to arrive at intervals during the autumn, remaining only a few days in each case. I obtained specimens on the 14th and

23rd November in complete winter dress. The arrival of the Golden Plover in August or September is the beginning of the shooting season in Bermuda, and is eagerly looked for by the British officer, who forgets all the heat and discomfort of the summer in the pleasure of once again handling his gun and cartridges. And a nicely-cooked Golden Plover for breakfast is by no means to be despised, as those who have been trifling with tough fowls and doubtful eggs for months can well testify. The note of this species differs from that of *C. plumalis*; it sounds like "wee-o-wee," sharply but clearly pronounced.

Ægialitis vociferus, Kildeer Plover.—The latest of the southward migrants, but regular in its visits. First seen about the middle of November, in small flocks, which remain till February, attaching themselves principally to the grassy bottoms and moist places on the south side. Persons living on this side hear their sweet wild note all night. A few remain till March, or even later.

Ægialitis semipalmatus, American Ringed Plover.—Arrives in small numbers early in August with the annual invading army of Stints and Sandpipers, remaining till October, and frequenting the sandy bays on the south shore, also the muddy edges of Peniston's Pond.

Ægialitis melodus, Piping Plover.—Rare. Major Wedderburn shot one at Mangrove Bay in September, 1848, and two were seen on a rocky island in Hamilton Harbour in September, 1850. Mr. Bartram has one specimen. Not observed in 1874.

Streptilas interpres, Turnstone.—This cosmopolitan species is a frequent visitor. It has been shot as early as the 3rd August. I obtained two on the 23rd December, 1874, but it probably remains all the winter.

Himantopus nigricollis, Black-necked Stilt.—The American representative of our *H. melanopterus*. Only one has occurred, shot at Warwick Pond on the 3rd June, 1853, by Mr. Hinson, and sent to Mr. Hurdis.

Lobipes hyperboreus, Northern Phalarope.—One found dead, floating in Riddle's Bay, March 21st, 1848, sent to Rev. H. B. Tristram. A female, partly in ruddy plumage, killed with a stick in Hamilton Harbour on the following day, and a third example captured on the edge of Devonshire Swamp by Mr. Hurdis on the 8th March, 1852. "It is remarkable that all the specimens were obtained without the aid of a gun" (Hurdis).

Philohela minor, American Woodcock.—"A single specimen was shot near Hamilton in October, 1842, and one was supposed to have been seen at Hungry Bay a few years afterwards by Mr. Fozard" (Nat. in B., p. 42).

Gallinago Wilsonii, American Snipe.—Usually makes its first appearance at the beginning of October, a straggler or two remaining till January, and occurs also in March, April and May in limited numbers on its northward journey. It has been seen as early as the 13th September (Hurdis). It seems rather a farce to talk of the snipe-shooting in Bermuda; but occasionally large flights come in, and really fair bags are made, such as six or nine couple a-day to two guns. Pembroke Marsh is the great place for

them, and a few usually take up their quarters in Devonshire Swamp. They are very good eating at first, but soon become rank from feeding in the brackish mud. They lie closer than our European Snipe, and a dog is a *sine quâ non* in the thick scrub-grown marshes. Their note is very similar, but they differ somewhat in plumage, especially in having sixteen tail-feathers instead of fourteen like our bird.

Gallinago media, English Snipe.—We have Major Wedderburn's authority for the occurrence of this bird in Bermuda. He shot two in Pembroke Marsh in December, 1847.

Macrorhamphus griseus, Red-breasted Snipe.—One "shot by Capt. Orde on the 29th September, 1847, at Harris's Bay; another was killed by Mr. C. Fozard on the 21st August, 1848" (Nat. in B., p. 43). A third was obtained on Pearl Island on September 10th, 1874, by Capt. Kirkwood, 53rd Regiment. This specimen was preserved by Capt. Rooke, who kindly presented it to me. [Three others were shot by Lieut. Festing, of the 20th Regiment, at Peniston's Pond, on the 17th September, 1875.—H. D.]

Micropalama himantopus, Long-legged Sandpiper.—Major Wedderburn killed two, one of which he unfortunately lost, in the beginning of August, 1848. [Lieut. Festing shot one at Peniston's Pond early in September, 1875.—H. D.]

Ereunetes pusillus, Semipalmated Sandpiper.—A regular visitor, arriving about the 1st August, or a few days earlier, and found in small flocks in the sandy bays, and on the margins of the open brackish ponds throughout the islands. They do not remain long.

Tringa minutilla, American Stint.—Arrives about the same time, and frequents the same localities, as the preceding species. I shot one as late as the 23rd December, probably a straggler left behind. I also obtained a solitary example on its northward flight on the 29th April, 1875.

Tringa maculata, Pectoral Sandpiper.—Not uncommon in September and October. The first I met with was feeding with a small flock of Semipalmated Sandpipers at Peniston's Pond, on August 3rd, 1874. It was tolerably abundant till towards the end of October, being usually found singly. Major Wedderburn says of this species (Nat. in B., p. 44), "On the 9th October, 1849, they appeared suddenly in thousands, particularly at St. George's, after a heavy gale of wind; the parade ground at that place was swarming with them, and I think Colonel Drummond killed some thirty or forty couple before breakfast; but, with the exception of a few stragglers, they were all gone by the following day."

Tringa Bonapartei, Schinz's Sandpiper.—This bird did not occur in the autumn of 1874, to my knowledge. It is recorded by Major Wedderburn, and is, I believe, sufficiently numerous at times, especially in the Great Sound and Castle Harbour.

Tringa maritima, Purple Sandpiper.—One was seen by Major Wedderburn at the entrance to St. George's Harbour.

Calidris arenaria, Sanderling.—Generally to be found in the autumn months, especially on the sandy beach below the Sand Hills, where I obtained specimens in November, 1874. One of these I lost temporarily, and on recovering it the next day I found

that not only the body, but the webs and *shafts* of the feathers, had been devoured by a swarm of voracious ants.

[*Limosa hudsonica*, Hudsonian Godwit.—A specimen of this bird in Mr. Bartram's collection was shot near the Causeway at St. George's in the autumn of 1875.—H. D.]

Totanus semipalmatus, Willet.—One was shot by Major Wedderburn on Pearl Island on July 3rd, 1848; doubtless a young bird driven by stress of weather from the breeding haunts of the species on the North American shores.

Totanus melanoleucus, Greater Yellowshank.—More or less common, arriving early in August, remaining for a month or so. Much in request among the energetic sportsmen who brave the heat and mosquitoes for the sake of a "bag" of "snippets." Its quadruple note, "thew-thew-thew-thew," is very loud and striking. Mr. Hurdis mentions one killed when on its northward migration, on the 5th June, 1852. Another was shot by Lieut. Denison on the 27th April, 1875, and one seen at the same time, but not obtained.

Totanus flavipes, Yellowshank.—The most conspicuous and noisy of the August arrivals. It has been seen as early as the 13th July, but usually disappears towards the end of September. Considerable numbers fall victims to the gun, as they are not bad eating. If a wounded one falls into the water it is possible to shoot the whole of the flock, as they hover over their unfortunate companion. This murderous proceeding is alluded to, I think, by Wilson. The only instances of the occurrence of this species in the spring took place in 1875, when I saw one on the 26th, and obtained two at Peniston's Pond on the 29th April. These were, of course, in beautiful plumage.

Totanus solitarius, Solitary Sandpiper.—I observed one on the 19th July, 1874, but they generally come with the other species in August. They soon betake themselves to the wooded swamps, where they may be found singly or in pairs throughout the autumn. Fresh arrivals sometimes take place in the spring. Their habit of bobbing the head and body when alarmed is very comical. I always found them very tame, even when I was accompanied by a big Clumber spaniel, whose elephantine advances in no way disconcerted them.

Tringoides macularius, Spotted Sandpiper.—Flocks of young birds appear early in August, followed soon after by a limited number of adults. They frequent the same places as the other "snippets," and serve to swell the "bag" of the gunner in August and September. A few remain all the winter, and several examples have been observed in spring, presumably strangers on their way north. The "weet-weet" of this bird, as it skims over the water like our European Common Sandpiper, is very familiar to residents in the islands.

Actiturus Bartramius, Bartram's Sandpiper.—One in my collection was shot by Gibbs at Peniston's Pond on September 20th, 1874. It was a single bird, and was in company with a flock of small Sandpipers at the time. [I obtained another in a field near Peniston's Pond on the 18th September, 1875.—H. D.]

Numenius hudsonicus, Hudsonian Curlew.—Appears early in

August, in limited numbers, and is so wary that very few are ever obtained.

Numenius borealis, Esquimaux Curlew.—Commoner, and easier to approach than the preceding. Locally termed "Wood Snipe." A good number accompanied the Golden Plover on their arrival in September, 1874, and several were killed along the north shore. Both species of Curlew remain but a short time.

Ibis falcinellus (var. *Ordii*), Glossy Ibis.—An inhabitant of the Southern United States, separated from the European species by Bonaparte in 1838, but occupying still an uncertain position with regard to it. One example only has occurred in Bermuda, seen by Mr. Hurdis, but not obtained.

Ardea herodias, Great Blue Heron.—Of this fine species Major Wedderburn says (Nat. in B., p. 38), "Many of these birds arrive in autumn, and a few remain throughout the year. In 1846 the nest of this bird, containing two eggs, was found amongst the mangrove trees at Hungry Bay. The Rev. H. B. Tristram kept one of these Herons alive in his garden (at the Parsonage, in Ireland Island), which was once seen to seize a Ground Dove and swallow it entire." I made numerous enquiries, and kept a careful look-out, but was unable to ascertain whether any second instance occurred of the nest being found. Most of the examples obtained or seen during my stay were in immature plumage. A few were always to be seen singly, among the islands in the Great Sound and Castle Harbour, being very wary and hard to approach.

Ardea egretta, Great White Egret.—Two were killed at Hungry Bay in 1840; several were subsequently seen, but not obtained. A coloured youth described two of these birds to me as having been seen by him in Warwick Swamp in October, 1874, adding that he shot one, but it was too much knocked about to keep. These may have belonged to the next species, but, from the size mentioned, I fancy them to be referable here. Mr. Bartram has obtained one specimen. [One was shot in Devonshire Swamp by Capt. Hussey, of the 20th Regiment, and presented to me on the 6th October, 1875.—H. D.]

Ardea candidissima, Snowy Heron.—Two beautiful specimens, in full plumage, were shot by Major Wedderburn in April, 1850, and several were seen in September following. Thus it seems that it visits the islands both in spring and autumn at the usual periods of migration. Mr. Bartram has a pair in his collection.

Ardea carulea, Little Blue Heron.—Mr. Hurdis says, "Of seven specimens of this Heron which came under my observation, four were shot in April and May, and three in September and October. It may therefore be considered both a vernal and autumnal visitor to the Bermudas. Three of the spring specimens were beautiful exemplifications of the change from the white plumage of the young to the rich vinous purple of the adult bird." Several of these examples are alluded to by Major Wedderburn in his notes. I do not think the bird visits the islands regularly. I obtained a beautiful male from Hungry Bay on the 4th May, 1875. It was in company with a white bird, perhaps an immature specimen of the same species.

Ardea virescens, Green Heron.—Also occurs on both migrations, sometimes in considerable numbers in the spring, frequenting the dense mangroves, and being uncommonly hard to obtain. Lieut. Denison and I each shot two beautiful specimens in April, 1875.

Nyctiardea grisea (var. *navia*), Night Heron; Qua-bird.—Immature birds are not uncommon in the larger mangrove swamps in the autumn and winter, but none have yet been obtained in adult plumage. One examined by Mr. Hurdis, shot on the 9th February, had the irides bright carmine, and the long filamentous plumes of the occiput beginning to appear. These birds sit motionless among the mangroves, and when disturbed fly into the tops of the thickest trees, whence they are very hard to dislodge.

Nyctiardea violacea, Yellow-crowned Night Heron.—Unlike its congener, this Heron has occurred in the plumage of the adult. Mr. Bartram has obtained several fine specimens. I obtained two myself, but both were in the spotted garb of youth. There is a great similarity between the young of these two species, but *violacea* may always be distinguished, in any plumage, by its longer tarsus and shorter bill. Occurs pretty regularly in small numbers, usually in autumn, but occasionally in spring. One of my specimens was shot as early as the 3rd August.

Botaurus minor, American Bittern.—A regular visitor in the autumn, and occasionally in March, frequenting the sedgy patches on the edge of the mangrove swamps. Mr. Hurdis says, "The stomach of one, shot in the Pembroke Marshes, contained an eel six inches long, a mouse, a dragonfly, a grasshopper, and part of a small golden carp." [No less than thirteen were shot by one officer, whose name I hesitate to mention, in the autumn of 1875.—H. D.]

Ardetta exilis, Least Bittern.—Has occurred both in spring and autumn, but, from its frequenting the thick mangrove swamps and hiding among their tangled roots, has not very often been obtained. Major Wedderburn procured several specimens between 1847 and 1850. I shot a female near the Sluice-gates on March 1st, 1875. [One was obtained at Basden's Pond in December, 1875.—H. D.]

Rallus virginianus, Virginian Rail.—One was shot by Mr. Hurdis on the 6th November, 1851. He remarks, "This is the 'only genuine Rail met with—a singular circumstance, when we bear in mind that *all* the Gallinules and Crane-Gallinules known to the continent of North America have been obtained in the Bermudas."

Porzana carolina, Carolina Rail; Sora Rail.—Visits Bermuda regularly, arriving early in September (one has been shot on the 24th August), and remaining till November, a few lingering on through the winter. On their vernal migration they frequently appear in considerable numbers in March and April. I have seen them as late as the 1st May. An extraordinary large flight visited the islands in October, 1849, departing in a body after a three-weeks' stay. These birds are a great nuisance to the gunner in search of Snipe and other denizens of the marshes, as they bother a dog sadly both by their numbers and their skulking habits; and they themselves are not worth powder and shot, except immediately after their arrival.

Porzana noveboracensis, Yellow Rail.—Two obtained in Pembroke Marsh by Major Wedderburn in October, 1847.

Porzana jamaicensis, Black Rail.—Observed, and also obtained, by Major Wedderburn in 1847 and 1848, and by Mr. Hurdis in 1851, always in the autumn.

Crex pratensis, Corn Crake ; Land Rail.—Major Wedderburn shot the only specimen of this European bird ever obtained in Bermuda, on the 25th October, 1847, and sent a notice of its occurrence to "The Zoologist" in 1849. At that time it was probably not known that the species is a straggler to the United States, but latterly several instances of its appearance there have been recorded, so that the fact of its being killed in Bermuda has lost much of the mystery which was originally connected with it.

Gallinula chloropus ? (var. *galeata*), Florida Gallinule ; Moorhen.—Resident, tolerably abundant, breeding in the flags and sedges in the deepest and most inaccessible parts of the marshes. Also migratory, visitors appearing in October. Like the "Sora," this is a sad pest to the snipe-shooter when working the thick places, unless his dog be as steady as old Time. The Latin name of this bird given above plainly shows that "doctors disagree" about its specific identity with our familiar Moorhen. So far as I can judge, the two are inseparable, but my Bermuda specimens seem a trifle larger than the European birds.

Porphyrio martinica, Purple Gallinule.—This bird must not be confounded with the European *P. hyacinthinus*, of which it is the American representative. Several were obtained in 1849 and 1850, in the month of April. Mr. Bartram has several specimens. I am almost sure I saw one in Devonshire Swamp in February, 1875. The shy habits and nature of the haunts of this species doubtless prevent many examples being recorded in the visiting list.

Fulica americana, American Coot.—Clearly distinct from our *F. atra*. A regular visitor in autumn, but never in great numbers. It also occurs on its northward journey, for Mr. Hurdis records one killed at Somerset on the 28th May, 1847, and I watched one close to me at Basden's Pond on the 27th April, 1875.

Phenicopterus ruber, American Flamingo.—One was seen in a mangrove swamp by Mr. Hurdis.

Cygnus americanus, Whistling Swan.—One shot in White's Marsh ; the witnesses were living in 1859.

Anser hyperboreus, Snow Goose.—Major Wedderburn's notes contain the following:—"On the 19th October, 1848, Mr. Hodgson Smith shot two of these birds, in their young plumage, at Riddle's Bay ; but unfortunately for the ends of science, they furnished the dinner-table instead of the cabinet." Mr. Hurdis adds, "A wing, pertaining to one of the specimens mentioned by Major Wedderburn, was fortunately saved by Mr. Smith, which removed all doubts as to the species it belonged to. In October, 1849, two 'white Geese' were observed in Mangrove Bay, and on the 10th March, 1851, four dark grey-coloured Geese were seen on the wing, near Peniston's Pond. These were doubtless *A. hyperboreus*." I may here remark that the young of the Blue Goose, *A. cærulescens*, much resembles that of *A. hyperboreus*, and

that consequently the birds seen may possibly have belonged to the former species.

Branta canadensis, Canada Goose.—Included in the list given in "The Naturalist in Bermuda," but with no information appended. It has been occasionally seen, but rarely obtained, in the islands. It was observed on three occasions during my stay, one being seen on Peniston's Pond in the autumn of 1874, one in the Great Sound on the 10th January, 1875, by the officers of the 53rd Regiment, as they were leaving the islands on their homeward journey, and a third near Daniel's Head by Lieuts. Denison and Hussey, R.E., early in February, 1875. A man of colour was seen by these two officers to fire at the last-named bird; but he stupidly let drive at it, with small shot too, at a hundred and twenty yards, instead of paddling much nearer to it, as he might have done. A wild Goose, weighing ten pounds when plucked, was shot in Southampton parish on the 7th January, 1875, and eaten forthwith by the fortunate gunner or his friends. This undoubtedly belonged to the present species, but cannot be definitely recorded.

Anas boschas, Mallard; Wild Duck.—A female was shot by an officer of the 56th Regiment at Warwick Pond on November 3rd, 1854. It was in company with some tame ducks, always taking wing the moment anyone approached the water (Nat. in B., p. 48). Four—a Mallard and three Ducks—were observed in the Great Sound by Lieut. Hussey, R.E., on the 23rd December, 1874.

Anas obscura, Dusky Duck; Black Duck.—Usually visits Bermuda in small numbers in the autumn, remaining till the end of January or even later. A flock of twenty frequented Harrington Sound and Peniston's Pond from Christmas, 1871, to February 15th, 1872 (J. M. Jones). Specimens were obtained by Lieut. Denison and myself in January, 1875, when there were a good many about. They are always very shy, and when disturbed frequently fly a long way out to sea.

Dafila acuta, Pintail.—Several specimens were obtained, all in immature plumage, in the winter of 1847-8. Mr. Bartram has a male in full plumage, shot by himself near St. George's. [A female Pintail was shot by Gibbs in Smith's Marsh on the 26th October, 1875.—H. D.]

Chaulelasmus streperus, Gadwall.—A female Gadwall was captured alive in December, 1849, and was in the possession of Mr. Hurdis till May, 1851, associating with some tame ducks and laying several nests of eggs, none of which, however, proved fertile (Nat. in B., p. 47).

Mareca americana, American Wigeon.—After a revolving gale in October, 1854, several of these birds were shot, and brought for examination to Mr. Hurdis, who obtained one himself in the following month (Nat. in B., p. 49). Two were shot at Devonshire Bay by Corporal Alder, R.E., in October, 1874.

Querquedula carolinensis, Green-winged Teal.—This is an occasional visitor in autumn. One was shot at Peniston's Pond on October 10th, 1874, and a few days later I stalked another in vain at the same place. Capt. Rooke, 53rd Regiment, shot one in Devonshire Swamp in November, 1874. I am not aware of the

occurrence of the European *Q. crecca*, or common Teal, in Bermuda. It occurs as a straggler in North America. [Four were shot by Lieut. Tallents, of the 20th Regiment, in the autumn of 1875.—H. D.]

Querquedula discors, Blue-winged Teal.—A frequent visitor on its way south, but rarely seen on its northward journey; most numerous in October. Nine couple were killed in Pembroke Marsh after the gale of the 22nd October, 1854, and many more at St. David's Island, where a native sportsman is said to have killed sixteen couple during the gale (Hurdis). I obtained several specimens in October and November, 1874, and saw two, one of which I knocked down, but unfortunately lost, in the mangrove swamp near the Sluice-gates, on April 30th, 1875.

Spatula clypeata, Shoveller.—“A single female specimen was shot in December, 1844, by Mr. C. B. Fozard” (Nat. in B., p. 47).

Aix sponsa, Summer Duck; Wood Duck.—“A female bird of this species was shot by Dr. Cole, 20th Regiment, on the 16th December, 1846” (Nat. in B., p. 48).

Fuligula affinis, Lesser Scaup Duck.—To make matters clear, in treating of this species, I must call in the aid of Dr. Coues, who says, in his “Birds of the North-West” (p. 574):—“Authors are at variance concerning the relationship of the bird to the preceding (*F. marila*), and the question is not yet settled. For myself I am rather inclined to keep the two apart, notwithstanding their very close resemblance, and admitting the probability that intermediate examples may be found. There appears to be something different in their range, the *F. affinis* being the more southerly. Not that it does not in the breeding season reach as high latitudes as the other, but that its autumnal movement is pushed to the West Indies and Central America, where the true *F. marila* is not recorded as occurring. It is improbable that two varieties, if they be really such, should preserve this difference.” Armed with this authority, I think I may safely refer the specimens of the Scaup chronicled in “The Naturalist in Bermuda,” all of which measured only 16 to 16½ inches in length, to this smaller species, *F. affinis*. The length of *F. marila* varies from 19 to 20½ inches. The specimens alluded to are one killed by Mr. C. Abbott, 20th Regiment, on the 19th December, 1846, and two others by Major Wedderburn, at Warwick Pond, on the 8th January, 1849. [On the 25th February, 1876, I shot a female of this species at Tucker's Town, which measured sixteen inches in length.]

Fuligula collaris, Ring-necked Duck.—One was captured, and kept for a short time alive, by Mr. Hurdis, on the 13th November, 1850. He was anxious to watch the change of the plumage, but the poor bird fell a victim to a cat (Nat. in B., p. 50).

Fuligula vallisneria, Canvas-back.—Mr. Hurdis purchased a specimen of this Duck from some boys, by whom it was captured alive in a marsh near James's Cottages, on the 30th October, 1851. It was destroyed by ants soon afterwards. On the 23rd November following he observed a very fine specimen in White's Marsh.

Bucephala clangula, Goldeneye.—“A male specimen was shot on the 10th April, 1854, in Pembroke Marshes” (Nat. in B., p. 49).

There were several of these Ducks about the islands in the winter of 1874-5, and I succeeded in obtaining two, both males, in immature plumage, at Peniston's Pond, on the 29th December, 1874, and 5th February following. A flock of seven frequented Shelly Bay Marsh, and were also seen by Lieut. Hussey in the Great Sound; but I am not sure that any other specimens were procured. I at first thought my birds were *B. islandica* (Barrow's Goldeneye), but if Dr. Coues be right in his opinion as to this latter species "having apparently a circum-polar distribution, and penetrating but a limited distance south in winter," I presume they are referable to true *clangula*. But are the two really distinct? [A female duck of this species was shot by Bendall in Devonshire Swamp on the 22nd January, 1876.—H. D.]

Bucephala albeola, Buffle-headed Duck.—One was obtained in Pembroke Marsh in December, 1845, and others have been occasionally observed subsequently. [Lieut. Tallents, of the 20th Regiment, shot a male bird of this species at Peniston's Pond in November, 1875.—H. D.]

Eidemia perspicillata, Surf Scoter.—Two recorded in "The Naturalist in Bermuda"—one killed with a stick in Hamilton Harbour on the 8th January, 1849, and another shot in Pembroke Marsh on the 7th October, 1854. Lieut. Hussey, R.E., shot one (a female) on a small pond near the lighthouse, on the 17th November, 1874, and kindly presented it to me.

Erismatura rubida, Ruddy Duck.—A young male of this species was shot by Dr. Cole, in a marsh near Hamilton, on the 24th November, 1846.

Mergus merganser, Goosander.—Included in Major Wedderburn's list as having been seen, but not obtained.

Mergus serrator, Red-breasted Merganser.—Mr. Bartram has an undoubted specimeu, obtained by him near St. George's.

Mergus cucullatus, Hooded Merganser.—A female was caught near Ireland Island by one of the crew of H.M.S. *Scourge*, on the 10th January, 1849, and one was shot near St. George's on the 23rd December, 1850. A third example was obtained by Mr. Bartram, and is now in his collection.

Sula fiber, Booby Gannet.—Major Wedderburn records the occurrence of one of these birds, which flew into one of the barrack-rooms at Fort Catherine on October 3rd, 1847. Another, in Mr. Bartram's collection, was shot by an officer with a revolver, curiously enough, very near the same fort. [A young bird in my collection was caught on the rocks near Fort Cunningham on the 26th September, 1875, and lived a short time in confinement.—H. D.]

Pelecanus fuscus, Brown Pelican.—Two examples are recorded by Major Wedderburn, who says (Nat. in B., p. 51), "One of these birds was shot at Hungry Bay, many years ago; and another was killed near St. George's in April, 1850, which was given to me by Colonel Drummond."

Graculus dilophus, Double-crested Cormorant.—Three instances of the occurrence of this species are recorded in "The Naturalist in Bermuda," viz., one shot by Capt. Orde, at Pitt's Bay, on the

10th October, 1847; one by Major Wedderburn, on Grace's Island, on the 8th February, 1848; and another, mentioned by Mr. Hurdie, which frequented the islands for some little time, but was not obtained. There is a specimen in Mr. Bartram's collection, and another in that of Mr. Lane, of Hamilton. There were several of these birds about the islands in the winter of 1874-5, but they were so wary that none were obtained. One was repeatedly seen, and once fired at, in the Great Sound; one attached itself to St. George's Harbour; and a pair frequented the "Stag" Rocks, near Shelly Bay, all the winter, conspicuous to the passers-by as they sat in solemn security on their accustomed pinnacle. I tried in vain to obtain one of these, but never got a shot. One of them flew close over my head one morning, but I had not my gun in my hand at the moment. [One was shot at Basden's Pond, by Lieut. Tallents, of the 20th Regiment, in the autumn of 1875.—H. D.]

Tachypetes aquilus, Frigate Bird; Man-of-War Bird.—Two were obtained at Ireland Island, on the 27th and 30th September, 1848, respectively, by Major Wedderburn. One was shot by Capt. Clutterbuck, of the 56th Regiment, on September 30th, 1852, and another by Capt. Tolcher, of the same Regiment, on April 2nd, 1854. Mr. Bartram has two specimens in his collection, obtained by himself.

Phaethon flavirostris, Tropic-bird.—The geographical distribution of the three known species of Tropic-bird, *P. æthereus*, *P. flavirostris*, and *P. rubricauda*, seems not yet well defined, and no doubt their extensive wanderings will render any attempt at precise limitation extremely difficult, certainly until we are in possession of a larger series of observations than at present. *P. flavirostris* (the "Boatswain-bird" or "Long-tail" of the Bermudas) is a familiar and abundant summer visitor to the islands, arriving at the end of February or beginning of March, and departing early in October. It is also recorded on the southern shores of Cuba, but I cannot make out any other regular locality for it. Where it goes to in winter is not, I believe, satisfactorily determined, though it may be taken for granted that the movement is in a southerly direction from Bermuda and Cuba. An occasional straggler is said to have been seen in Bermudian waters in winter time, presumably an early arrival, or backward young bird left behind. One was shot as far north as the coast of Nova Scotia, after a violent gale from the south, on the 4th September, 1870. I saw this bird in the Halifax Museum. The excellent accounts of the habits and nidification of this species given by Mr. Hurdie and Major Wedderburn have left me but little to say. The single egg, which in colouring is not unlike that of our Kestrel, is deposited in holes in the rocks, always in those which have a flooring of sand, preference being given to steep and overhanging cliffs on the south shore and the islands about Castle Harbour. A few pairs nest on the northern shore, where the cliffs are much lower. Sometimes one can see the sitting bird's long tail-feathers protruding from the nest; while in another case the nest may be so far in, horizontally, that one can only tell there is one by the harsh grating cry of the disturbed occupant. Both male and female sit, fighting

vigorously with their formidable bills in defence of their home. The young also show fight; in fact, the species is peculiarly fierce and untameable. Three young ones I kept alive for about two months maintained their savage nature till the last, refusing to feed themselves, striking viciously at anyone who approached them, and even at one another. Their flight is peculiar, but graceful, and they never seem tired of their perpetual wheeling and manœuvring. They take beautiful headers, like a Tern or Gannet, in pursuit of small fish. It is rare to meet with a specimen possessing two good long central tail-feathers; one is generally smaller and shorter than the other. Some of these feathers are of a lovely orange-pink. They get rubbed off during incubation, and may be picked up near the breeding-places. Two broods are reared, fresh eggs being found as early as the 10th April, and again at the end of June: there are intermediate examples, probably laid by birds whose first nests have been visited by the spoiler. That these birds revisit their breeding-stations year after year is, I think, clearly shown by the following circumstance:—Mr. Bartram, by way of experiment, slit the two webs of one foot, and cut off one or two claws, of a young bird in a nest near his house. Next year this bird turned up again, and made its nest close to the same spot. This attachment to the family residence is, I fancy, far from unusual with migratory birds. Swallows and other familiar visitors to England are known to possess it in a marked degree. On a calm day the bright greenish blue tint of the Atlantic waters, as they gently rise and fall above the white sands below is reflected on the glossy white breasts and under parts of the Tropic-birds in a most remarkable manner as they cruise about, at no great height, along the shores or among the islands. During the breeding season the parent birds “off duty” are to be seen in the neighbourhood of their nesting-places all the morning till about noon, when the greater part disappear in a rather mysterious manner. I came to the conclusion that they proceed to a considerable distance out to sea, returning at dusk, and this opinion was much strengthened by seeing two old birds sitting on the water one afternoon, at least one hundred miles from the Bermuda shores. This was during a voyage from Bermuda to New York, on the 7th August, 1874, when the second “young hopeful” had probably left, or was about to leave, the nest, and therefore does not prove much; but it shows that these strong-winged birds, who would probably do their one hundred miles in three hours, or even less, *do* travel to such distances from land long before they have thought of quitting their breeding haunts. In Castle Harbour, where there are a great number of Tropic-birds continually on the wing, and where they are left comparatively undisturbed during the daytime, this disappearance is, or appears to be, on a somewhat smaller scale.

Larus marinus, Great Black-backed Gull.—Mr. Hurdis mentions an immature example of this Gull, which was captured alive in the Great Sound in December, 1851, and Mr. Bartram has a fine specimen, also in immature plumage, shot by himself near Stocks Point on the 27th December, 1862.

Larus argentatus, Herring Gull.—Without venturing to discuss the relative merits and demerits of the varieties, or sub-species, *occidentalis* of Audubon, and *Smithsonianus* of Dr. Coues, I shall assume that all the examples that have occurred in Bermuda may be assigned to the true *argentatus*. These Gulls occur frequently, not regularly, and many specimens have been obtained. One in my collection was shot in Devonshire Bay on the 4th November, and they have been seen as late as the 19th March. [This Gull was numerous in the autumn of 1875. I obtained several specimens, all immature, the bill in most cases measuring one inch and three-quarters in length. These are probably referable to the variety *occidentalis*.—H. D.]

Larus delawarensis (*L. zonorhynchus* of Audubon), Ring-billed Gull.—Only one on record, killed by Major Wedderburn near the Dockyard on the 1st January, 1849, during a north-westerly gale.

Larus tridactylus, Kittiwake.—Not uncommon, but irregular in its visits, which occur from January to March. Most of the examples obtained are in immature plumage.

Larus atricilla, Laughing Gull.—One seen, flying close past him, by Major Wedderburn, at Ireland Island. Mr. Hurdis records that one was taken alive by a fisherman in the winter of 1851-52, and was confined for some time in a spare room, eventually effecting its escape.

Larus philadelphia, Bonaparte's Gull.—Three are recorded by Major Wedderburn. One was shot by himself on the 27th January, 1849; a second was seen by him on the 15th December, 1849; and another was killed on the 24th February, 1850. [Two in Mr. Bartram's possession were shot in St. George's Harbour in January, 1876.—H. D.]

Xema Sabinei, Sabine's Gull.—Major Wedderburn says, "A single specimen was shot by Colonel Drummond, near St. George's, but the date I do not recollect."

Sterna anglica, Gull-billed Tern.—One only has occurred, taken alive in the R.E. workshops at Boaz Island, on the 29th April, 1875. This bird, which proved to be a female, lived only a short time. It is now in Lieut. Denison's collection.

Sterna hirundo, Common Tern; *Sterna paradisæa*, Roseate Tern.—These two Terns used to visit Bermuda annually, breeding there in considerable numbers on the rocks and small islands in Castle Harbour; but I hear they have now left the place, never to return. Doubtless the increase in the population of the island and the continual plundering of their nests have driven them away. They were sufficiently numerous in 1850; but I cannot ascertain the date of their last appearance. Not a single one was to be seen in 1874 or 1875.

Sterna fuliginosa, Sooty Tern.—Of rare occurrence. Major Wedderburn says, "Dr. Cole shot a specimen of this Tern in October, 1846. During the whole time I was quartered in Bermuda I only saw one of these birds, and that in the year 1848. I was walking on the sand-hills, and saw a bird apparently dead on the ground. I put down my gun, and picked the bird up, and was just putting him carefully in paper, when my prize thought fit to come to life

and flew away, taking me so much by surprise that I never thought of using my gun. It was a most beautiful specimen, and must have been driven on shore by some heavy gale." Mr. Hurdis records that a third example was found in an exhausted state in Devonshire parish, on the 23rd October, 1854, after a severe gale the previous day. [A young male of this species, in curious plumage, was caught near Paget Quarry, and brought to me on the 19th September, 1875.—H. D.]

Anous stolidus, Noddy Tern.—A solitary example was killed near Ireland Island by Capt. Tolcher, 56th Regiment, on the 12th September, 1854.

Oceanites oceanica, Wilson's Petrel.—Major Wedderburn says, "I have often seen these birds flying about near the North Rock, and once or twice inside the outer reefs in stormy weather, but never succeeded in shooting any of them." One was shot by Mr. Harford, 56th Regiment, some distance from the shore, on the 30th June, 1853. Mr. Bartram's collection contains a specimen. I am not aware that this species has ever been found breeding in Bermuda. I searched in vain for nests, but should not be surprised to hear of them being discovered there some day or other.

Puffinus major, Wandering Shearwater.—Two recorded by Mr. Hurdis were taken alive on the 2nd June, 1851, near Hamilton. Mr. Bartram has one example in the dark plumage, which, though probably only a special state of *P. major*, has led to the creation of the species *P. fuliginosus*, or Sooty Shearwater.

Puffinus anglorum, Manx Shearwater.—A specimen in Mr. Bartram's collection, captured while sitting on its solitary egg in a rocky hole on the south shore some years ago is, I think, clearly referable here. The egg was unfortunately broken. There is no record of the bird's breeding on any other occasion, nor of any other specimens being obtained; but it is quite possible that it, as well as Wilson's Petrel and other *Procellaridae*, may formerly have frequented the islands in numbers, and that an occasional pair may revisit their old haunts. Such birds would, from their crepuscular habits, be but little noticed.

Puffinus obscurus, Dusky Shearwater.—Since Mr. Hurdis, in 1849, identified the "Cahow" or "Cowhow" of the historians of Bermuda with this interesting species, very few observations have been made on the few pairs still frequenting the islands. That the poor "Cahow" has almost ceased to breed there is a melancholy fact. Formerly it was plentiful, and even within the last fifteen years, Mr. Bartram informs me, there were many nests in the isolated rocks, both on the north and south shores. On the north side the bird was formerly called "Pemblyco" or "Pimlico," probably from its call-note, while on the southern shores the name "Cahow" or "Cowhow" was applied to it. I found two nests in 1874, each containing a single young bird, one of which I kept alive for about six weeks, intending to send him to the Zoological Society's Gardens in London; but before I got an opportunity of doing so the unfortunate bird died. He had become remarkably tame, following me about the house and garden, waddling along awkwardly enough on his tarsi, and

uttering a musical "chirrup" the while. He used to sit under the table where I was writing, pecking away at my boots, and apparently extremely happy. I fed him on fish, and gave him a salt-water tub occasionally, which he thoroughly enjoyed. He slept a great deal during the day, and usually got behind an open door—the darkest place he could find—for his "siesta." When I took him from the nest he was nearly able to fly, but still retained the long nestling-down of the young bird, slate-coloured on the head and shoulders, light brown on the under parts; the former soon rubbed off, but the latter was more permanent, and was not got rid of for some days. The nests were simple holes in the face of the rock—my bird had barely room to turn round in his. There was no unpleasant smell about the nests or young birds, the peculiar—and to me not disagreeable—odour of the Shearwater tribe being alone distinguishable by its presence. I saw nothing of the old birds, who were in all probability far out at sea at the time. An egg of this species, kindly presented to me by Mr. Bartram, is, of course, pure white: it has a considerable polish, and is about the size of a bantam's, but less elongated in form. Mr. Bartram was good enough also to present me with two skins of the adult bird. He tells me that the statement made by the old historians of Bermuda as to the capture of the "Cahow" at night is no exaggeration; for, on visiting an island one night where there were several pairs breeding, he quickly caught half-a-dozen of them, the stupid things settling on his body as he lay on the ground, and allowing themselves to be taken in his hand! I know of only one instance of a "Cahow" being seen on the wing in the daytime in Bermudian waters: this was in August, 1874, when one was shot crossing Castle Harbour, by Lieut. Hopegood, 97th Regiment.

Podiceps cornutus, Horned Grebe.—One shot by Dr. Cole, on the 24th November, 1846, is now in the Rev. H. B. Tristram's collection. One was killed by Capt. Tolcher, 56th Regiment, near Spanish Point, on the 1st February, 1855: it was in company with three or four others. Mr. Bartram has two specimens of different dates.

Podilymbus podiceps, Pied-billed Grebe; Water Witch.—Three are recorded in "The Naturalist in Bermuda"—two obtained in October, 1849, and one by Major Wedderburn, in February, 1850. Mr. Hurdis once found a perfect skeleton of this bird by the side of a pond. Tolerably abundant in the winter of 1874-5, especially at Trott's and Basden's Ponds. The way in which these birds can sink under water, without leaving a ripple behind, is truly marvellous, and entitles them fully to the name "Water Witch." They are very shy, but I once surprised one asleep on a flat stone, as much to my astonishment as to the bird's. All the specimens I saw were in immature plumage, wanting the black bar on the bill and the black throat-patch.

Mergulus alle, Little Auk; Sea Dove.—Mr. Hurdis says, "One of these birds was captured alive on the 28th January, 1850, by a servant of the Rev. J. U. Campbell at Ireland Island. It was in company with four or five others on a piece of grass-land near

that gentleman's house. Unfortunately this specimen was destroyed by a pig before I had an opportunity of seeing it. My information was obtained from Mr. Campbell himself, who had this bird in his possession."





APPENDIX—1883.

THROUGH the kindness of my friend Mr. J. T. Bartram, of Stocks Point, I am enabled to add a few new species to the original list, and to make several additional interesting notes on various others which have been already recorded.

Hydrochelidon nigra, Black Tern.—First obtained by Mr. Bartram in October, 1876, during a severe N. W. gale, in St. George's Harbour, when there were a great number of Terns of various species about. Mr. Bartram is of opinion that there must have been at least five different kinds in the Harbour. He only obtained two, the present species and *Sterna fluviatilis* (= *S. hirundo*), the Common Tern, the reappearance of which after so many years is very interesting, but he killed and lost two large Terns, which may have been *S. caspia* or *S. regia*.

Puffinus opisthomelas, Black-vented Shearwater.—One taken on its single egg at the east end of the islands on the 1st May, 1877. Length of bird, 15 inches; wing, 9; tail, $3\frac{1}{8}$; bill, $1\frac{1}{2}$; tarsus, $1\frac{1}{2}$; middle toe and claw, $1\frac{3}{4}$; under parts white, upper parts black; tail black; sides of the head below the eyes black; crissam white, but a black bunch of feathers meeting underneath across the vent. The egg measures $2\frac{3}{8}$ by $1\frac{1}{2}$ inches.

Whether this is a distinct species from *P. obscurus* seems still uncertain.

Dendroeca maculosa, Black-and-Yellow Warbler; Magnolia Warbler.—One shot on the 7th May, 1878, by Mr. Bartram.

Regulus satrapa, Golden-crested Kinglet.—One shot by Mr. Bartram in the spring of 1883. A considerable number appeared at this time at the east end of the islands.

The above four species are new to the Bermudian lists. The following notes refer to species previously obtained.

Turdus migratorius.—Great numbers appeared in the winter of 1879-80. They were seen in flocks of twenty to thirty all over the islands.

Parula americana.—One shot by Mr. Bartram near his house on the 26th March, 1878.

Dendroeca virens.—One in summer plumage shot by Mr. Bartram on the 7th May, 1878.

Dendroeca pinus.—One flew into Mr. Bartram's museum on a dark stormy night in October, 1877, and lived in his aviary for fifteen months, when it made its escape.

Vireo olivaceus.—One shot by Mr. Bartram 13th October, 1878.

Ægiothus linarius.—Thousands appeared in December, 1878. Mr. Bartram caught between sixty and seventy near his house.

Cardinalis virginianus.—One caught on board ship 350 miles west of Bermuda in April, 1878.

Falco communis.—Two obtained in October, 1876, by the man Hollis who shot the Red-tailed Buzzard (see notes on *Buteo borealis*). One of these, a female, was only winged, and lived in Mr. Bartram's possession till March, 1878.

Haliaetus leucocephalus.—Undoubtedly seen by Mr. Bartram on Castle Island on the 1st May, 1877; also at Stocks Point on the 10th October, 1878. This last bird remained in the neighbourhood several days, and eventually took its departure unharmed.

Mergus serrator?—Several Mergansers of unknown species appeared near the Old Ferry in January, 1883, and two were shot, but were eaten before they could be identified.

Tachypetes aquilus.—A large number seen off the Great Head, St. David's, during a strong N. W. gale, and a female obtained, in October, 1876.

Larus philadelphia.—A flock of between fifty and one hundred seen in St. George's Harbour in January, 1879.

Oceanites oceanica.—According to Mr. Bartram there are generally numbers to be found round the fishing-boats a mile or two outside Castle Harbour, in May, June and July. Some days there are ten or twelve flying about, some days none at all. The specimen in Mr. Bartram's collection was caught by a man fishing on St. Catharine's Flat in his hand. Ten or twelve were seen in the Flatts Harbour in October, 1878.

Puffinus obscurus.—Mr. Bartram has a theory that this bird lays two eggs; his reason being that he has always found the nests in pairs, with the male bird sitting on one egg and the female on the other. This is quite within the bounds of probability, and, if only the species were more plentiful at the present time in Bermuda, it would be a most interesting problem for solution.

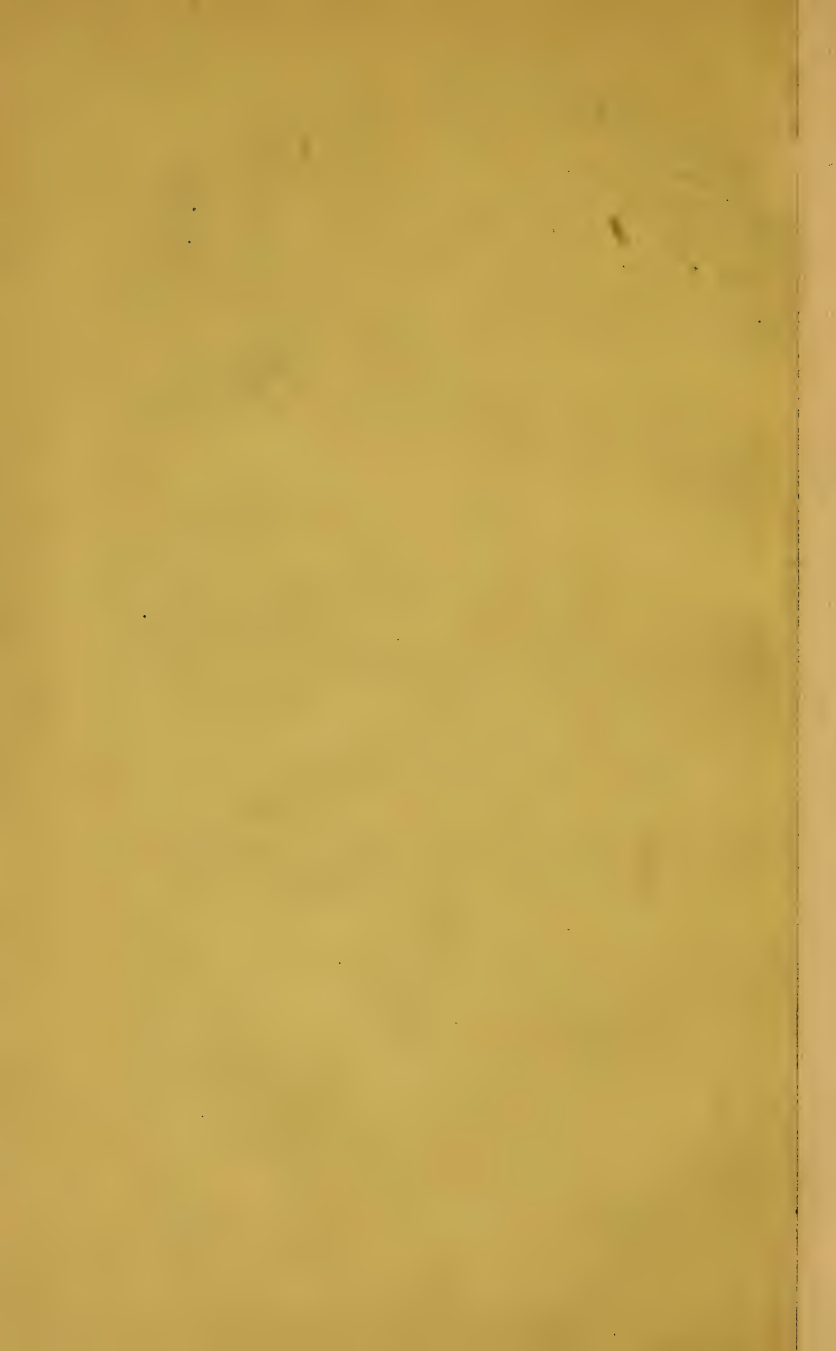
S. G. R.

Aldershot, 1883.

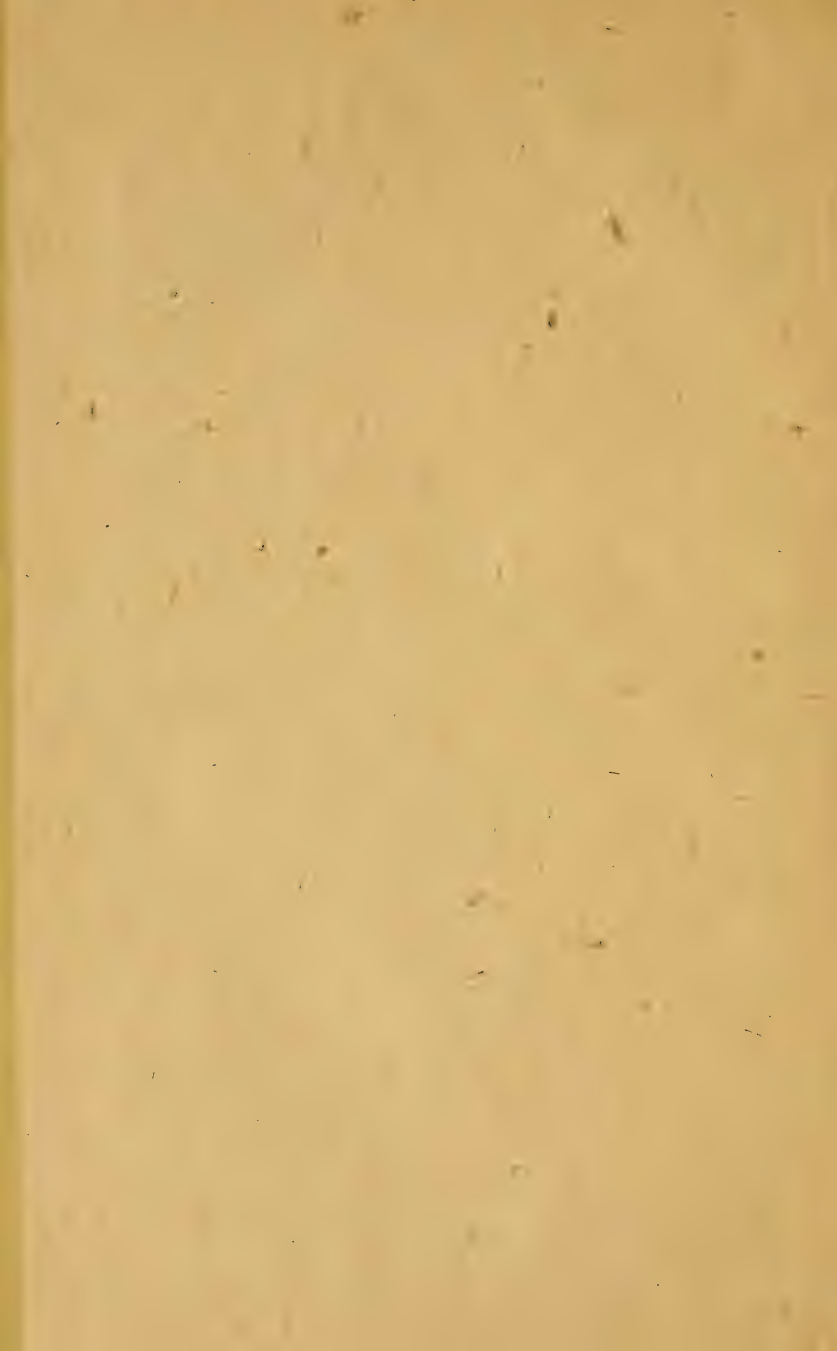
















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